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INDEX.

Abdomen, enlargement of, 433.
Abdominal operations and after-care, 408.
Abdominal section in parturition, conditions requiring, 744; after-treatment, 773; practical points, 796.
Abdominal operations sequalæ, 814.
Abortion—for vomiting of pregnancy, 117; habitual, 205; medical and social aspects of, 314.
Abscess—mammary in the virgin, 220; pelvic, 380; pelvic in man, 128; psoas, 61; tuberculosis, treatment of with hot water flushing, 277.
Acetanilid for chancre and chancroid, 402, 602, 792.
Adenitis, cervical, in children, 194.
Africa, kola-nut of, 390.
African arrow poison, 7.
Alabama, medical law of, 373.
Albumen and other proteids, test for, 565.
Albumin in urine, 471; test for, 364.
Albuminuria—caused by antipyrine, 757; in acute catarrhal enteritis, 488; in infantile disease, 728.
Agaricine in night-sweats, 637.
Alcohol and digestion, 566.
Alexander, H. A.—letter, 284.
Alkaloid, opium, new, 18.
American Academy of Medicine, 394.
American childhood from a medical standpoint, 664.
American Electro-therapeutic Association, 87.
Amicrobian fever following arterial obliteration, 680.
Amputation below the knee, 687.
Amyl nitrite—in chloroform poisoning, 549; a cure for hiccough, 396.
Anæsthetics, administration to children, 684; in midwifery, 520; relative value of, 71.
Anatomy, pathological of ecthyma, 116.
Anatomy at Oxford University 804.
Ancephalia, 222.
Anderson, M.—Purpura Hemorrhagica and metrorrhagia, 350.
Anders, J. M.—Clinical Lecture, 263, 459.
Angeiocholitis, jaundice from, 293.
Angina pectoris, 471; nature and treatment, 757.
Animals, diseases of in relationship to those of man, 318.
Ankle, fracture, 61.
Ano, fistula in, 94.
Anti-kidnapping league, 177.
Antipyretics—action of, 750; in childhood, 604; treatment in children, 559.
Antipyrin—causes albuminuria, 756; injections of, for hemeralopia, 280; in puerperal fever, 131, 226; test for pure, 565.
Antipyrin in tonic spasm of parturient uterus, 837.
Antisepsine, Radlauers, 753.
Antisepsis for chiropodists, 71.
Antiseptics—benzin, 285; chloroform as, 168; elixir, French, 330; medication, 241; poultice, 527; remedy, tannic acid as, 57.
Antrum of Highmore, suppuration of, 332.
Apomorphia, 115.
Appendicitis, 216, 352; surgical treatment of, 715.
Aristol—in diseases of the eye, 509; in venereal disease, 547.
Arkansas, medical legislation in, 260.
Army medical board, 345; medical department, 227.
Arrow poison, African, 7.
Artesian wells in Iowa, 221.
Arthritis, rheumatoid, 89, 99.
Artificial anus, 687.
Aspiration for the treatment of hernia, 371.
Association of American Anatomists, 259.
Association of American Physicians of Berlin, 373.
Asthma and emphysema, 265.
Ataxia, hyposulphite of sodium and silver in, 509.
Ataxia sign, an early, 513.
Atropine in diseases of the heart, 509.
Auscultatory percussion, value of in diagnosis, 665.

Bacilli of Malaria, 562; of syphilis, 564.
Bacteria—pathogenic, 131; 474; Dr. Klein on, 802.
Bacteria of influenza 840.
Bacteriology, 354.
Bagwell, J. F., M. D., letter, 790.
Baldy, J. M., 526.
Barr, A. D., was it relapsing fever, 37.
Bartholinian gland, cancer of, 221.
Beates, Henry—the expectant treatment of syphilitic infection, 498.
Beef-tea, 133.
Behrens, B. M.—Permanent opening of drumhead 186.
Belladonna and electricity, for tachycardia, 331.
Benedict, A. L.—Metric System, 266.
Benzin as antiseptic, 285.
Bergey, D. H.—Dysentary, 205.
Beri-beri, 306.
Berlin aquarium, 69.
Berlin, Association of American Physicians, 373.
Berlin letter, 69, 329.
Bermuda letter, 787.
Bertrand, J. H., Leprosy, 9.
Bigelow, H. R.—letter, 340.—Electricity in Pelvic Surgery, 592.
Bile pigment in urine, 168.
Biological laboratory, the Da Costa, 525.
Birds, malaria in, 28.
Blackwell, E. T., Malarial Fever with Liver Involvement, 35.
Blackwell, E. T.—Vomiting of pregnancy, 190.

Bladder—exfoliation in female, 18; extirpation of, 26.
Blennorrhagia, albuminuria in, 598.
Blennorrhagic rheumatism, mercury in, 593.
Bigelow, H. R.—Medical Electricity and Batteries, 453.
Blood alkalinity of under normal and pathological conditions 804.

Book Reviews:
Birnbaum, Max, M. D.—Koch's Method to Cure Pulmonary Tuberculosis Treated, 706.
Bourneville—Clinical and Therapeutical Investigations of Epilepsy, Hysteria, and Idiocy, 49.
Burt, W. H.—Tuberculosis, 202.
Capp, W. M.—The Daughter, 110.
Charcot, J. M.—Complete Works, 312.
Cordell, Eugene T.—Historical sketch of the University of Maryland, 752.
Edinger, L.—Nervous System, 477.
Flint and Wilson.—Auscultation and Percussion, 339.
Foster, F. P.—Dictionary, 256.
Gordon, C. A.—Rabies and Hydrophobia, 368.
Goss, I. J. M.—Materia Medica, 225.
Goss, I. J. M.—Practice of Medicine, 201.
Greenleaf, C. R.—Epitome of Tripler's Manual, 49.
Gross and Sturgis.—Impotence, Sterility and Allied Disorders of the Male Sexual Organs, 340.
Hare, H. A.—Therapeutics, 790.
Hatfield, Marcus P.—A Compend of Diseases of Children, 705.
International Clinics, 675.
Jastrow, J.—Mental Phenomena, 339.
Kelsey, C. B.—Stricture of Rectum, 173.
Letts & Company.—Medical Diary, 256.
Lutaud.—Studies in Hydrophobia, 395.
Martin, Edward—Essentials of Surgery, 674.
Medicinal—Kalender, 22.
Mitchell, C.—Diseases of Kidneys, 202.
Morris, H.—Practice of Medicine, 225.
Nettleship, E.—Diseases of Eye, 395.
Newth, Owen—Post-Mortems, 424.
Paget Sir James—Studies of old case-books 828.
Parvin, T.—Science and Art of Obstetrics, 21.
Penzoldt, F.—Clinical Therapeutics, 311.
Pepper, E.—Malaria, 368.
Potter, S. O. L.—Compend of Human Anatomy, 110.
Powell, W. M.—Diseases of Children, 141.
Purdy, Chas. W.—Diabetes, 791.
Régnier, L, L'Intoxication chronique par la Morphine, 80.
Ribot, Th.—Diseases of Personality, 752.
Roberts, J. B.—Manual of Modern Surgery, 140.
Sayre Lucious E.—Essentials of Pharmacy 829.
Seifert-Müller, Clinical Diagnosis, 453.
Senn, N.—Surgical Bacteriology, 477, 674.
Smith, J. L.—Diseases of Infancy and Childhood, 173.
Starr, L.—Digestive Organs in Infancy and Childhood, 368.
Starr, M. A., nervous disease, 80.
Taylor, F.—Manual of Practice of Medicine, 110.
Thornton, Wm.—Origin, Purpose and Destiny of Man, 706.
Transactions of American Orthopedic Association, 453.
Transactions New York State Medical Association, 49, 675.
Tyson, J.—Examination of Urine, 424.
Wight, J. S.—Suggestions to Medical Witness, 396.
Whipple, Farrington H.—Clinical Examination of of the Urine, 751.

Blood, alkalinity affected by large doses of sodic sulphate, 646.
Bone grafting, 145.
Booth, D. S.—Pelvis abscess in man, 128.
Boric acid in otorrhœa, 364.
Börner, Earnest—Clinical Lecture, 647.
Bougies, metallic, in gleet and sexual neurasthemia, 554.
Brain, bullet wounds in, 10.
Brain, sarcoma, 216.
Breech presentations, treatment, 836.
Bright's disease, 1; ætiology, 759: treatment of 597; following infantile purpura, 513.
Bromide of ethyl, 71.
Bromoform, poisoning by, 549.
Bromoform in whooping cough 839.
Bronchitis, 651; chronic, 613; produced by vapors of picric acid, 637.
Brown-Sequard fluid in tuberculosis, 175.
Brush, H. L.—Letter, 369.
Burial of so-called stillborn children, 482.
Burns, treatment of, 48.
Burr, Wm. H.—Hydrogen peroxide, 705.
Byers, H. F., hystero-epilepsy, 812.

Cadwallader, D. W., fibro-papilloma of the bladder, 734.
Caffeine for post-partum hæmorrhage, 430.
Caffeine, hyperkinetic action of, in large doses, 596.
Calculi, biliary, 291.
California, health legislation in, 464.
California, Southern as health resort, 136.
Calomel and salt, 392.
Calomel in kidney disease, 457.
Canaliculi, occlusion of, 375.
Cancer, of a poisonous nature, 553.
Cancer of breast treated by methyl-violet, 641.
Cancer of Bartholinian gland, 221.
Cancer of stomach, 11.
Cancer of uterus, 4.
Cancrum oris, 284.
Carbuncle, 151.—and diphtheria, caustic treatment of, 252.
Cardiac—affections, strychnine in, 637; hypertrophy and dilatation, 650.
Cary, C.—Report of Clinic, 99.
Carey, Wm. A.—Inadequate hospital facilities, etc., 704.
Caries of costal cartilage treated with methyl-violet, 733.
Carbolic acid, variations in caustic action, 831.
Carolina, health legislation in, 464.
Carpaine, 548.
Catarrhal dyspepsia, 459.
Cates, B. B., Currette in fistula in ano., 94.
Carcinoma—disappears with development of phthisis, 794; of the breast, 688.
Castor oil, 37.
Castration of women, sexual life after, 557.
Cataract, soft, 375.
Cement, insoluble, 453.
Cerebro-spinal meningitis, specimen, 609.
Cerna, David.—The therapeutic uses of Kava-Kava, 492.
Cervix, flexible wire stems for stenosis, 136.
Cetrarin, therapeutic value of, 706.
Cheese, new poison in, 565.
Cervical glands, scrofulous ulceration of, 527.
Chancre and chancroid, acetanilid for, 402, 602, 792.

Chapman, J. M. T.—Mechanical treatment of umbilical hernia.
Chest—cotton and collodian dressing for, 392; traumatism of, 577.
Chicago Medical Record 804.
Children—dyspepsia of, 46; medication for, 196; pleuritic effusion in, 176; tonsils of, 179; vaccination of, 388; burial of so-called stillborn, 482.
China, leprosy in, 73.
Chinese treatment of diptheria, 104.
Chiropodists, 71.
Chloralamide, 755.
Chloroform, 96; in typhoid fever, 636; as an antiseptic, 168; in tracheotomy, 307.
Chlorosis, its treatment, 513.
Cholera toxine, isolation of, 765.
Cholera, epidemic of in Europe and America from 1830 to 1890, 605.
Chloroform poisoning, amyl nitrite in, 549.
Chorea, 445; association of Sydenhams and rhythmical, 598.
Chylochle—in New Orleans, 318; parasitic, 317.
Chronic acid in epistaxis, 208.
Chronic alcoholism, strychnine in, 783.
Chronic phthisis, 739.
Cities, micro-organisms in, 117.
Cirrhosis of liver and nervous symptoms, 833.
Clarke, A. P., M. D., hernia, 776.
Club-foot, 270; operation for, 178.
Cobb, W. H. H., Supra-pubic Cystotomy, 7.
Cocaine, 18; injections, death from, 85; new reaction of, 646; poisoning, 635; in small-pox, 550, dangers of, 508.
Cocaine, actions on circulation, 830.
Cocoanut for tape worm, 177.
Cod-liver oil, disguise for, 118.
Cold abscesses, treatment of, 681.
Colds, common, 440.
Colic, hepatic, 42.
Collapse, stimulant in, 174.
Colombia, leprosy in, 198.
Coltman, R.—Clinical Lecture, 233.
Comedones, 430.
Concussion of brain and spinal cord to certain conditions, 614.
Congress of American Physicians and Surgeons, 399.
Constipation, voluntary, 764.
Consumption—and emphysema, 767; antifebrinization in, 117.
Contagious Diseases Act, 391.
Convulsions—depending upon rickets, 607; in children, treatment of, 521, 604.
Copaiba as an expectorant, 676; as diuretic, 280.
Copper coloring matter in tea, detection of, 646.
Cornea, phlyctenular ulceration, chlrorate of potassium in, 586.
Copyright bill, 144.
Corpuscles, white, in pneumonia, 16; white, in disease, 550.
Corrosive sublimate as a disinfectant, 685.
Coryza, 199.
Cotton and collodion dressing for chest, 392.
Country practice, 314.
Cranium, temporary resection of, 759.
Creasote, 308.
Creasote, emulsion of, 106.
Cremation and its safeguards, 277.
Crematory at Heidelburg 805.
Crico-thyroid joint, luxation of, 70.
Croonian lectures, 766.
Croup—322; etherization in, 723.
Curative effect of operations, 663.
Curiosity, laryngological, 118.
Curetting of uterus in puerpural fever, 633.
Curetting of the uterus 827.
Currier, J. M.—Medical colleges of Vermont, 237.
Curtis, F. C.—Vesicular eruption in scarlatina, 244.
Cystoma of jaw, 214.
Cyst, parovarian, 487.
Cystotomy, supra-pubic, 38.
Cystoscopy, 7, 215.

Da Costa, J. M., 54.
Davidson, W. T.—Letter, 368.
Dawson, B. F.—Foreign body in ear for nine years, 462.
Day, time of to operate, 514.
Delafield, Francis—clinical lecture, 490, 650.
Diabetes—pathogeny, 600; Jambul in, 754, teeth in, 398.
Diaceturia in infantile disease, 725.
Diarrhœa, arsenite of copper in, 792; infusion of roses for, 400.
Dietetic employment of fat, 397.
Dietetics of chronic nephritis, 343.
Digataline, new method of administering, 549.
Digitalis in pneumonia, 829.
Digestion, influence of exercise on, 457.
Digestive troubles of infants, 362.
Digitalis and strychnine as circulatory stimulants, 509.
Digitalis in pneumonia, 708.
Diller, T.—Care of chronic insane, 549.
Diplomas in Pennsylvania, endorsing, 256.
Diphtheria 13, 16, 104; caustic treatment of, 252; resorcin in, 233; and tetanus, immunity from, 76; statistics and treatment, 560; therapy, 769; treated with hydrogen peroxide, 756; treated with mercurial inunctions, 800.
Dirtiest city in the world, 261.
Disease, and starvation, 344.
Diseases, names of, 333.
Disinfection, hints on, 564.
Diuretic, copaiba balsam as, 280.
Diuretine, alterability of 106; therapeutic effects, 678.
Dixon, S. G., Koch reagent for tuberculosis, 69; pharmacists, women, 65.
Dyspepsia, diagnosis and treatment of catarrhal, 459.
Dock, G.—Fevers of the South, 92.
Dodge, C. L.—Membranous croup, 322.
Doses, small, 104.
Druggists and venereal patients, 364.
Druggist's error in Germany, 398.
Drugs, impure, 289.
Drumhead, opening of, 186.
Dysentery, 209.
Dysmenorrhœa, dilation for, 54.
Dyspepsia, 235; of children, 46.

Eagleton, S. Potts—Hydrogen Peroxide, 542.
Ear, dangers of syringing, 304.
Ear diseases—new remedies for, 279; foreign body in for nine years, 462; suppuration of middle in infancy, 347.
Echinococcus of the lung, 550.
Eclampsia, post-partum, treatment, 723; treatment of, 558.
Ecthyma, 116.
EDITORIALS:
Abortive treatment of syphilis, 366.
American Medical Association, 79.
Amylene hydrate and epilepsy, 394.
Anæmia, treatment of, 338.

Appendicitis, excision of vermiform appendix in, 450.
Asthma in children, treatment of, 339.
Atlanta Medical and Surgical Journal, 201.
Barking cough of puberty, 139.
Boric acid in treatment of chronic constipation, 474.
Cancer germ, 78.
Chancres, excision of, 423.
Chronic constipation with boric acid, treatment of, 474.
Clinical lectures, 173.
Cocaine, dangers of, 508.
Concealed advertisements in medical journals, 309.
Curetting of the uterus in puerperal fever, 633;
Constipation, habitual, 671.
Da Costa, resignation of, 476.
Deaf infants, training school for, 475.
Deaths in cold weather, 283.
Digestion for abscess cavities, 311.
Diseases of women, electricity for, 449.
Dust and tubercle bacilli, 283.
Editor, farewell of, 476. (Dr. Dulles.)
Education and Diseases of School Children, 19.
Electricity for diseases of women, 449.
Electricity in treatment of extra-uterine pregnancy, 366.
Epilepsy and amylene hydrate, 394.
Farewell of the Editor, 476. (Dr. Dulles.)
Female pelvic organs, exploratory puncture of, 200.
Filaria sanguinis hominis, 310.
Genito-urinary apparatus, neuroses of, 223.
Gonococcus in diagnosis of vulvitis, 109.
Gynecological suggestions, 253.
Hematuria in typhoid fever, 281.
Herpes vacciniforme of infants, 452.
Homœopaths and Medical Examiners' Bill, 255.
Immigration and Public Health, 47.
Impressions, maternal, 282.
Incorporation of Pa. State Medical Society, 48.
Inebriates, legal restraint of, 138.
Infantile Malaria, 749.
Infants, herpes vacciniforme of, 452.
Intra-uterine stem pessary, 703.
Jefferson Medical College, 20.
Koch's fluid in non-tuberculous persons, 337.
Koch's method, 169.
Koch's remedy, 170.
Koch remedy for tuberculosis, 77.
Koch treatment, present states of, 641.
Legal restraint of inebriates, 138.
Lupus, nature of, 254.
Malaria, micro-organism of, 170.
Maternal impressions, 282.
Medical and Surgical College of New Jersey, 395.
Medical and Surgical Reporter, 507.
Medical examiners and medical education, 137.
Medical Examiners' Bill, 48, 255.
Michigan, University of, 452.
Micro-organism of malaria, 170.
Myxœdema relieved by grafting with thyroid, 108.
Nashville Journal of Medicine, 225.
Neuroses of genito-urinary apparatus, 223.
Neuroses, traumatic, 423.
Oesophagus, varices of, 199.
Pathogenesis of tetanus, 421.
Pelvic inflammation and general practitioner, 393.
Pelvic organs, exploratory puncture of, 200.
Pennsylvania, Medical Examiners' Bill for, 48.
Pennsylvania State Medical Society, 48.
Philadelphia Polyclinic, 475.
Physicians' accounts, 365.
Pregnancy, electricity in treatment of extra-uterine, 366.
Presbyterian Hospital in Philadelphia, 421.
Puberty, barking cough of, 139.
Retinol, a new solvent and antiseptic, 591.
Resignation of Dr. Da Costa, 476.
Scarlet fever, tongue in, 394.
Scarlet remedies—Koch's remedy, 170.
Spermine, 473.
Sponges, antiseptic preparation of, 825.
Surgeon-General Sutherland, 20.
Sutherland, Surgeon-General, 20.
Syphilis, abortive treatment of, 366.
Tetanus, 421,
Tongue in scarlet fever, 394.
Trachertomy vs. intubation, 785.
Training school for deaf infants, 475.
Transfusion of blood and salt solution, 47.
Transperitoneal hysterorrhaphy, 224.
Tubercle bacilli, and dust, 283.
Tubercle bacillus, diagnostic significance of, 107.
Tuberculosis, 77.
Typhoid fever, 281.
University of Michigan, 452.
Varices of œsophagus, 199.
Vermiform appendix, excision of in appendicitis, 450.
Women, electricity for diseases of, 449.

Egypt, hydrophobia in, 135.
Eichler, A.—Resorcin, 124; salol, 454.
Eiffel tower, 195.
Electrical treatment, 217.
Electricity, belladonna for tachycardia, 331.
Electricity and pelvic surgery, 340, 464, 477, 592.
Electric light, analgesic action of, 792.
Electric wires, 71.
Embryotomy of the living fœtus, is it justifiable? 660.
Emmenagogue, salicylate of soda, 797.
Emphysema, 265.
Emulsion of creasote, 106.
Endometritis and its treatment, 519; medicated pencils in, 555.
Endocarditis, 101, 154.
Endoscopic examination of bladder, 809.
Enlargement of abdomen, 431.
Enteritis, albuminuria in acute catarrhal, 481.
Entopic gestation, indications for operation, 557.
Epilepsy, 59, 118, 180; teeth in, 136; trephining for, 193; from deformed fracture produced with the obstretic forceps, 643; bromide of ethylene in, 707.
Epistaxis, chromic acid in, 308.
Epididymitus, gonorrhœal, 641.
Ergot in tyyhoid fever, 61.
Erysipelas, 198; treatment by ichthyol, 509; treatment with salicylated glycerine, 680.
Eshner, A. A.—Fibrosis, anterio-capillary, 412.
Ethylene bromide in epilepsy, 707.
Evolution, sexual perversion as phase of, 436.
Exision of vermiform appendix in appendicitis, 450.
Exalgine, therapeutic uses of, 636; untoward effects of, 547.
Exostosis of humerous 822.
Eye, aristol in diseases of, 509; diseases of, with caries of vertebræ, 99; diseases, massage in, 132.
Eye-lotions, infectious, 794.

Fast, challenge to, 106; forty-five days, 25.
Fat, dietetic employment of, 397.
Febrifuge, lantanine as, 46.
Feeding, infant, 26.
Feet, perspiring, remedy for, 206.

Fenger, Christian—New operation for hare-lip, 621.
Fetus in utero, death of, 121.
Fever, enteric, oscillations in bodily weight, 134.
Fever, puerperal, antipyrin in, 131.
Fevers of the South, 92.
Fibroid tumors, electrical treatment of, with an analysis of forty-six cases, 697.
Fibroids of the uterus, 432.
Fibrosis, 412.
Fibro-papilloma of bladder, 734.
Fisher, J. M.—Clinical Lecture, 403.
Fish poison, 252.
Fistula in ano, 94.
Fluviograph, 472.
FORMULÆ:
Alopecia, 668, 784—Anæsthesia, local, 589—Antiseptic gauze, 590—Aphrodisioc pills, 701—Aristol in gynæcology, 632—Asthma, 784—Antiseptic betol as an 824.
Balanitis, 702—Bladder, irritable, 747—Blenorrhagia, 783—Bronchitis, 632—Bed-rooms 823.
Castor oil mixture, 590—Chlorosis, 670—Convulsions, infantile, 702—Cough mixture, 747—Coryza, 631, 669—Croup 823—Creoline in gastric-enteritis 824—Corn cure 824.
Diarrhœa, 748—Diarrhœa, summer, 701—Diarrhœa, 589—Diarrhœa, infantile, 670—Diphtheria, 748—Diphtheria, 590—Diphtheria, topical application, 590—Dysentery, 701, 747, 784—Dysmenorrhœa, 590, 632—Dyspepsia, 701—Diptheritic membrane solvent 823—Diarrhoea 823—Dysentery 824.
Earache drops, 670—Ear-wax to soften, 752—Eczema, 589, 702, 784—Enema, nutritive, 590—Epilatory paste, 669—Epilepsy, 707—Erysipelas, 792—Erythema, 784—Eczema 824.
Fever mixture for children, 590—Flatulence, 670—Flatus, intestinal, 747—Fœtid breath, 590—Freckles, 670.
Gonorrhœa, antipyrine, 590—carbonate of soda, 747—ergotine in, 669—Gout, liniment, 670—Gastro-enteritis 824.
Hæmorrhoids, chrysarobin for, 632—Hæmorrhoids, 702—Hæmorrhoids, 747—Hands, chapped or bruised, 669—Hiccough, 684—Hair tonic 824.
Icteres, 701—Ichthyol, 632—Insomnia, 783—Intertrigo ointment 823.
Laryngitis 823.
Mercury, salicylate, 632, 701—Metrorrhagia, 632—Migraine, 590—Mouth wash, 669.
Night sweats, agaricum in, 637—Nasal diphtheria 823.
Ox-gall, 702—Oxyurus, 784.
Phthisis, ointment, 670—Pregnancy, vomiting, 748—Pruritis, 632—Pruritis, senile, 669—Purgative pills, 747—Painful teething cocaine in 824.
Quinine, formula for, 669.
Seat worms, 670—Soothing syrup, 748.
Tetanus, 589—Tonge fissure, 669—Toothache, drops, 589—Tonsilitis, 589—Typhoid fever, 748.
Urethritis, acute, 748—Uterine wafers, 602—Uterus, sub-involution, 702.
Varicose leg ulcers, 707—Vomiting of pregnancy, 668, 669.
Whooping cough, 670, 701, 702, 747, 748, 783, 823—Warts 824.

Fœted discharges, salol as a deodorizer, 681.
Food, lion flesh, 345.
Foot-ball casualities, 805.
Forceps, how to apply, 134.
Foreign bodies lodged in the body, 640.
Fox, H. Webster—Resection of optic nerve, 152; 653.
Fracture of ankle, 61.
France, depopulation of, 114.
France, vaccination in, 419.
Fraternity, Nu Sigma Nu, 346.
Free, J. E.—Puerperal pneumonia, 302.
French antiseptic elixir, 380.
Fullerton, Anna M.—Letter, 110.

Gall-bladder, enlarged, 652.
Gall-stones, expurius of, 678.
Galvanism in diseases of uterus, 403.
Galvano-cauterization, intra-uterine, 682.
Ganglion, gasserian, removal of, 282.
Gangrene, 236.
Gas, illuminating, dangers of, 236.
Gaston, J. McFadden—Traumatism of the chest, 577.
Gastric diseases, utilization of food, 755.
Gastric function in chronic nephritis, 448.
Gastric mucous membrane, atrophy of, 570.
Gastric ulcer, 271, 416, 570.
Gastritis, chronic, 570.
Genitals, defective development of, 836.
Germany, druggist's error in, 398.
Gibbes-Shurley method in phthisis, 676.
Gingivitis common to men and dogs in India, 759.
Girls, education of, 216.
Gleet, treatment by metallic bougies, 554.
Glycerin, and meat juice, 363,
Goitre, suffocating, 641.
Goldbeaters skin for cracked nipples, 733.
Gonococcus, some reasons in favor of the non-specific properties of, 497.
Glycosuria and diabetes, 539.
Goodell, William—Clinical Lecture, 487.
Golden Belt Medical Society, 374.
Gonorrhœa. 75; contagiousness of, 454; novel treatment of, 711.
Goodell, W.—Abdominal operations and aftercare, 408.
Goodell, Wm.—Clinical Lecture, 319.
Goodell, Wm.—Clinical Lecture, 807.
Grafting, bone, 145.
Griffith, J. P. C.—Climatic treatment of phthisis, 182; Clinical Lecture, 570.
Guaiac as purgative, 55, 753.
Guiacol for treatment of tuberculosis, 485.
Gumma, tubercular, 214.
Guyon, Dr.—Clinical Lecture, 809.
Gynecology, 217.

Hamilton John B.—Resignation as Surgeon-General 805.
Hands, peroxide of hydrogen, for cleaning, 237.
Hansell, H. F.—Clinical Lecture, 375.
Harelip, new operation for, 621.
Hare, H. A., Clinical Lecture 32, 179.
Harvard, Four Years' Course, 843
Hatch, J. L., history of bacteriology, 354.
Health legislation in California and South Carolina, 464.
Headache, syphilitic, 89; treatment of, 468.
Heart, atropine in diseases of, 509.
Helepin, 181.
Hematemesis in gastric ulcer, 416.
Hemeralopia, treatment of, with injections of antipyrin, 280.
Hemiplegia following grippe, 149.
Hemoglobinuria from use of quinine, 318.
Hæmorrhage—post-partum, treated with caffeine, 430 treated with iodoform gauze, 763; uterine, 431.

Hæmostyptic, 556.
Hemorrhoids, 101, 346.
Hæmatoporphyrin in the urine, 606.
Hæmaturia and endoscopic examination of bladder, 809.
Hernia, cerebral, 250; surgical treatment for radical cure of, 988, 688, 776; spontaneous cure, 128; strangulated, 417; treatment of by aspiration, 371.
Herpes, abortive treatment of, 679.
Herpes Zoster, multiple, 399.
Hiccough cured with nitrate of amyl, 396.
Highley, G. N.—Hygiene of infancy, 122.
Higher medical education, 686.
Hill, T. B.—Ergot in typhoid fever, 61.
Hoffman, Jos. E., abdominal surgery, 814.
Hollopeter, W. C.—Clinical Lecture, 29.
Holt, L. Emmet—Clinical Lecture, 607.
Holt's divulsor, 216.
Homœpaths and Medical Examiners' bill, 257.
Homœopathy by a homœopath, 248.
Homœopaths converted, 234.
Homœopaths, how they look at it, 261.
Horse-kicks, treatment of, 554.
Human lymph in therapeutics, 636.
Hunt, W.—Koch's remedy for tuberculosis, 295.
Humphreys, B. Frank,—little liver pills, 509.
Hydrastin, action of on vascular system and uterus, 594.
Hydrastis canadensis in uterine hæmorrhage, 683.
Hydrate of amyl in epilepsy, 118.
Hydrocele, varieties of, 443.
Hydrogen peroxide, 463, 582, 645, 705.
Hydrophobia, transmissibility from man to man, 764; in Egypt, 135.
Hygienic Congress, International, 766.
Hygiene in France, 645.
Hyoscine in mania and insominia, 636.
Hyperemesis, treatment with creasote, 308.
Hyperosmic acid in suborbital neuralgia, 677.
Hyperphoria, treatment of, 831.
Hypnotism as a remedy, safety of, 444.
Hypodermic syringe, 284.
Hysterectomy, 65.
Hysterectomy, 807.
Hystero-epilepsy, 812.
Hysteria, traumatic, surgical intervention, 761.

Ichthyol—in diseases of female genitalia, 798; varnishes, 483.
Illinois, foreign medical diplomas in, 402.
Immunity from influenza by vaccination with calf lymph, 685.
Inebriates, legislation for, 75.
Inebriety, narcotic, prevention of, 290.
Infancy, hygiene of, 122.
Infantile malaria, 749.
Infants, digestive troubles of, 362.
Infantile cerebral palsies, 838.
Infection through milk, 562; traumatic, 527; through the soil, 562.
Infectuous disease compulsory notification of 840.
Influenza—127; epidemic, 795; reputed cause of, 564; statistics of forty-one thousand cases, etc., 522.
Influenza bacteria 840.
India, women physicians in, 118.
Inhaler, 168.
Insane, fractured ribs in, 402; care of, 461.
Insomnia in infants, 759.
Intestinal obstruction, 410.
Intubation of larynx in diphtheria, 561.
Iodine, 67, 245.
Iodoform-ether-glycerine injections in septic cavities, 359.
Iodoform—in treatment of tuberculosis, 485; solubility in oil, 725; in chronic eye affections, 595; in tubercular bronchitis, 754.
Iowa, artesion wells in, 220.
Iritis, 376.
Iron in the organs, testing for, 606.
Iron, protochloride, 322.
Italian pharmacopea 843.

Jambul in diabetes, 754.
Jaundice, catarrhal, 150.
Jaundice following passage of biliary calculi, 291.
Jaundice from angeiocholitis, 293.
Jaw, cystoma of, 214.
Jefferson College's new surgeon, 398.
Jefferson Medical College, 766.
Johns Hopkins Hospital, 943.
Johnstown Correspondent's Assoc. 806
Journal Amer. Med. Assoc., 766.
Journal of Gynæcology, 843.
Juvenile smoking suppression of, 840.

Kahn, Cornelia—Incarcerated retroflexed uterus, 535.
Kava-Kava, Therapeutic uses of, 492.
Keloid, 445; lupus, 527.
Keen, W. W.—Compression of subclavian artery 821.
Kidneys, salol on, 147; calomel in, 457.
Kiernan, J. G.—Sexual perversion as phase of evolution, 436.
Koch's Lymph, 22, 49, 68, 81, 203, 217, 274, 279, 295, 465, 525, 606, 726.–chemical reactions of, 525. —treatment, death from, 152; and the German Government, 165; treatment condemned, 262; failure with, 276; treatment in Vienna, 218; treatment in New York, 174; institute in New York, 178; physiological behavior of, 741.
Kola essence, stimulant, 147.
Kola-nut of Africa, 390.

Labor—protracted, strychnia and hot douche in, 720; weak in primaparæ of advanced age, 647.
Lanolin Milk, 27.
Lantanine as febrifuge, 46.
Laparotomy—for disease of liver, 430; drainage of abdominal cavity after, 719; in intestinal obstruction, 410; sequence of, 567; Trendelenburg's posture in, 556.
Laplace, Earnest—Clinical lecture, 527.
Laryngological curiosity, 118.
Larynx, artificial, 194.
Larynx, extirpation of, 194; intubation in diptheria, 569.
Larynx, tuberculosis of, 336.
Lassar Dr.—Order of the Legion of Honor conferred 804.
Lavage, internal, 280.
Leeches, effect of in uterine cavity, 835.
Leg Ulcer, 527.
Lehigh Valley Med. Assoc. 805.
Leidy, Joseph, obituary, 544.
Leon, A. M.—Pelvic abscess, 380.
Lepers, progeny of, 724.
Leprosy, 9; in China, 73; in Columbia, 198; in Norway, 17; commission, 447; in Russia, 766.
Lewis, W. H., letter, 141.
Life saving methods in still-births, 246.
Ligatures, preparation of, 514.
Linea alba, rupture of, 470.
Lion flesh for food, 345.

Liver—laparotomy for disease of, 430; pills, 509; resection of, 198.
Liver, surgery of, 514.
Loefler, F., M. D., Clinical Lecture, 769.
Logan, Jos. P., death of, 843.
Longstreth, M.—Clinical Lecture, 1.
Lopez, J. H.—Lecture, 226.
Lumbar Nephrotomy, 662.
Lunatic, dangerous, 260.
Lung—death from injection in, 56; excision of the parts of, 796.
Lungs—Terpene iodide in diseases of, 336.
Lupus, 258; and Koch fluid, 279; excision of, with immediate skin transplantation, 358; treatment, 753; and epithelioma, diagnosis of, 527.
Lycopodium, 92.

Mania and insomnia, hyoscine in, 636.
Malaria in birds, 28.
Malarial cachexia, 90; fever, 35; hæmaturia, 597.
Malaria, sunflower plantations as prophylactic against, 198, bacilli of, 562.
Mann, Dr.—Reports of Clinics, 357.
Mansfield, A. D. Hydrogen peroxide in otorrhœa, 463.
Massage, as cause of pyæmia, 278; in eye diseases, 132.
Massey, G. Betton—Electrical treatment of fibroid tumors, 697.
Mattison, J. B.—Bermuda letter, 787; cocaine poisoning, 635.
Mays, Thos. J.—specific and non-specific of pulmonary consumption, 692.
McAlister, A.—Laparotomy in intestinal obstruction, 410.
McArthur, L. L.—cancer of the rectum, 532.
McMurtry, L. S.—Letter, 477.
Measles, 64, 207.
Measles epidemic, 838.
Meat-juice and glycerin, 363.
Meat preservation, 103.
Meat putrefaction of, 462.
Medical and Surgical Reporter, 507.
Medical and Surgical College of New Jersey, 53.
Medical Education, State Board of, 141.
Medical Examiners, 215, 374.
Medical Examiners for Pennsylvania, proposed Act for, 51, 226, 231, 257; unordained, 144.
Medical legislation in Arkansas, 260; of Alabama, 373; in Missouri, 480.
Medical schools in New York, 448.
Medical Society, Golden Belt, 374.
Medical Society of New York, 86, 215.
Medical Society of the State of Pennsylvania, 290.
Medical diplomas, foreign, in Illinois, 402.
Medical Jurisprudence, 273.
Medical News, 766.
Medication, antiseptic, 241.
Medicine, practiced without registering, 205.
Medicine, study of in Thibet 392.
Medicines to nursing mothers, influence of the milk upon the infant, 684.
Melano-sarcoma, excision of sternum for, 479.
Menorrhagia, tampon in, 368.
Menstruation, 219.
Mental disorders, 739.
Menthol for vomiting in pregnancy, 364.
Methyl-blue as an anæsthetic, 793.
Methyl-violet, in cases of costal cartilages, 733; in cancer of the breast, 641.
Metric system, 66, 843.
Metrorrhagia, 350.
Microcidin, a new antiseptic, 600, 715.
Microscopic lenses, important improvement in, 646.
Micro-organisms in cities, 117.
Micturition, 113.
Migraine, powder for, 458.
Milk—condensed for emulsions, 28; impure in large cities, 371; lanolin, 27; tuberculous, 105; fætid from mammery glands, 763.
Minot, Dr. Francis, 843.
Mississippi Valley Medical Association, 346.
Missouri—Medical legislation in, 480; medical practice in, 252; regulation of prostitution in, 362.
Modern discoveries of new cures, 726.
Monesia bark, 251.
Montgomery, E. E.—Clinical Lecture, 4, 431.
Moore, R. L.—Letter, 285.
Moore, T. H.—Cystoma of jaw, 214.
Morphine, antidote for, 217.
Morphine habit treated by gradual withdrawal, 446.
Motor insufficiency of stomach, diagnosis, 757.
Morris, J. E.—Influenza, 127.
Moyer, H. N.—Railway surgery, 327.
Musgrove, C. W.—Diptheria, 96.
Musser, J. H.—Clinical Lecture, 89; letter, 174.
Mutual Aid Association, 203.
Myers, A. F.—Measles, 207.

Napthaline in Typhoid fever, 509.
Napthols, and salol, 346.
Narcotic inebriety, preventton of, 290.
Nasal polypi, crystals in, 580.
National Association of Railway Surgery, 345.
Neall, C. H. M.—Neuralgia from tooth-pressure, 304.
Needle, simple method for removing, 566.
Neilson, W. H.—Tuberculin in Locomotor Ataxia, 673.
Nephritis—following whooping-cough, 29; chronic, 343; mistaken for chlorosis, 30; acute parenchymatous, 530; gastric function in chronic, 448.
Nerve-centres, surgical intervention in, 500.
Nerve disorders, paroxysmal, 222.
Nerve-storms, cardiac, 513.
Nerve-grafting, 835.
Neuralgia—from tooth-pressure, 304; secondary to *la grippe*, 610; relation of atmospheric conditions to, 644.
Neurasthemia, sexual, metallic bougies in, 554.
Neurasthemic stigmata, 638.
Neurosis—removal of uterine appendages in, 249; traumatic, 328.
Neuritis, 12; optic, of malarial origin, 383.
New Jersey, Medical and Surgical College of, 53; public health in, 145.
Newspapers and patent medicines, 745.
New Philadelphia, 458.
New York—Academy of Medicine, 10; Letter 10, 192; Med. Soc. 86, 215; vital statistics in 1890, 372; medical schools in, 448.
New Orleans, parasitic chylocele in, 317.
Night sweats, agaricine in, 637.
Night-sweats of phthisis, treatment of, 830.
Nipple, Paget's disease of, 74.
Nipples, fissured, 308; cracked gold-beaters skin for, 733; fissured, treatment of, 555.
Nitrates and nitrites, estimation of in water, 804.
Noble, C. P.—After treatment of cases of abdominal sections, 773; minor uterine surgery, 156; peroxide of hydrogen for cleaning hands, 237.
Noble Chas. P.—Letter 827.
Norway, leprosy in, 17.
Nothing new under the sun, 146.
Nurses trained, 315; menstruating, 467.

Nu Sigma Nu Fraternity, 346.
N. Y. Post Graduate School 805.

Obituary—Dr. Joseph Leidy, 544.
Obstruction, intestinal, 410.
Occlusion of the os uteri during four days parturition, 503; Bedema, hysterical blue, 599.
Ointment, Mayer's, 27.
Oöphorectomy, 807.
Optic Nerve, resection of, 152, 653.
Opthalmia, prevention in the newborn, 684.
Opthalmology, uses of Nitrate of silver and sulphate of copper in, 546.
Osborne, J. D.—Letter, 113.
Otitis, early treatment of, 359.
Otorrhœa, 463; boric acid in, 364.
Ouabaine as a local anaesthetic, 549.
Ovarian cyst, enormous, 761.
Ovarian pregnancy, 642.

Packard, J. H.—Clinical Lecture, 59.
Pagn, R. C. M.—Clinical Lecture, 739.
Paget's disease of nipple, 74.
Palate, adhesion of soft, to pharynx, 385.
Pan-American Congress, 766.
Papillitis, 12.
Paretic dementia, ninety cases of, 711.
Pasteur and his work, 455.
Paralysis—facial, 236; in the new-born, obstetrical, 643.
Paralysis spinal in children, 838.
Parasitic, chylocele, 317.
Park, R.—Report of Clinic, 214.
Parturition, unconscious, in primipara, 133, 799.
Patella, luxation of, 194.
Patients, venereal, and druggists, 364.
Patton, Joseph M.—Clinical Lecture, 610.
Pelvic-abscess, 380; surgery, electricity in, 477; 592.
Pelvic and abdominal operations, sequalæ 814.
Pelvis, malignant disease of, 319.
Palsies, infantile cerebral, 838.
Pennsylvania, endorsing diplomas in, 256.
Pennyroyal, a poison, 70.
Pepper, W.—Clinical Lecture, 291, 767.
Peppermint, oil of, in la grippe, 549.
Pepsins, liquid, 44.
Peptonuria in infantile disease, 725.
Perineum-operation for larcerated, 456; immediate surgical intervention in larcerations of, 799.
Peritonitis, 67, 211.
Pernicious anæmia of parasitic origin, 513.
Peroxide of hydrogen, 45; for cleaning hands, 237.
Pessaries, use of, 567.
Pneumonia, treatment with large doses of digitalis, 829.
Pharmacists, woman, 65.
Pharmacopœa, Italian, 843.
Pharynx, adhesion of soft palate to, 385.
Phenocol, hydrochloric, 679.
Phenyl, hydrozin test for sugar, 565.
Philadelphia Hospital, use of obstetrical department for teaching, 146.
Philadelphia Obstetrical Society, 159.
Philadelphia Polyclinic, 144.
Phonograph in medicine, 525.
Phthisis, 83; testicle therapy for, 204; climatic treatment of, 182; surgical and climatic treatment, 715; chronic, 739; serum infections in, 594; hypordermic iujections of iodoform in, 597; treatment with artificial atrospherus under pressure, 156.
Picrotoxine, antidote for morphine, 217.
Pin eight years in body, 369.
Piperazidine as a solvent for uric acid, 831.
Piperazin, 676; apparent growth after labor, 604.
Placenta-prævia, diagnosis of by palpation, 520; retained in miscarriages, treatment, 721; adherent, 487; with effusion, 613.
Plaster of Paris bandages, 681.
Pleurisy, 2.
Pleuritic effusion, 613, 768; in children, 176.
Pleuritis, sub acute, treatment, 740.
Pneumonia, croupous, infectiousness of, 318; puerperal, 302; white blood corpuscles in, 16; treatment of by large doses of digitalis, 708; treatment, 793.
Poison glands of toads and salamanders, 222.
Poison, fish, 252; pennyroyal, 70.
Politics and pension examiners, 229, 285.
Polyclinic, Philada., 560.
Polyuria of frequency, 604.
Porro operation, puerperal hysterectomy, 603
Poultices for spreading ulcers, bad effect of, 484; antiseptic, 527.
Powder blower, 113.
Powder for migraine 458.
Pregnancy, abortion for vomiting of, 117; diagnosis of previous, 373; duration, 763; extra-uterine, 361; menthol for vomiting in, 364; bolynia of 604; vomiting of, 190.
Premature labor, induction of, in contracted pelvis, 503.
Prescription, who owns it? 426, 805.
Primipara, parturition in, 133.
Prostitution in Missouri, regulation of, 362, 469, 522,
Prostrate, hypertrophied, 193; new method of treatment of, 424; resection of, 129.
Pruritus, relief of, 145.
Psoas abscess, 61.
Pseudo-chorea, case, 714.
Puerperal—convulsions, 368; pneumonia, 301.
Puerperal eclampsia, injections of ether in, 603.
Puerperal fever, curetting of the uretus in, 633.
Puerperal septicæmia, eliminative treatment, 682.
Pulmonary consumption, the specific and non-specific treatment of, 692.
Pyæmia—massage as a cause of, 278; primary, 400.
Pyoktanin, 76; stains, 290.

Quackery, suppression of in Italy, 686.
Quill drainage tubes, 234.
Quinines, hæmoglobinuria from use of, 318; in whooping cough, 800.

Rabies experiments, 85.
Radlaurs antisepsine, 753.
Randall, B. A.—Clinical Lecture, 347.
Raori resin, 118.
Rectal and pelvic disease in women, association of, 666.
Rectum—cancer of, 530; wound of, 141.
Refraction, 216.
Reflex pain an evidence of internal hæmorrhage, 552.
Railway spine, the back in, 699.
Reineking, H.—Appendicitis, 352.
Relapsing fever, 37.
Reports of Clinics, 99, 214, 357.
Resorcin—124; in diphtheria, 233.
Retinol, 591.
Reynaud's disease, 192.
Rheumatic hyperpyrexia, treatment, 709.
Rheumatic neuritis, 769.
Rhematism, chronic, treatment of, 509.
Rheumatoid arthritis, 99.
Ribs, fractured, in the insane, 402.

Richmond, medical attendance for poor in, 373.
Rigg, Dr.—Typhoid Fever, 655.
Riley, H. A.—Medical jurisprudence, 273.
Ring, F. W.—Optic neuritis of malarial origin, 393.
Roberts John B.—Exostosis of humerus 822.
Robert's fermentation test for sugar 841.
Rupture of linea alba, 470.

Saccharine, action of on heart, 831.
Salicylic acid to prevent scarlet fever, 604.
Salicylate of mercury as an antiseptic, 711.
Salol, 434; and naphthol, 346; on kidneys, 147; as a deodorizer of fœted discharges, 681.
Sanitary Convention of Pennsylvania, 205.
Saphena vein, litigation of in varicose veins,387.
Sarcoma in brain, 216; retro-peritoneal, 651; of the shoulder, 687.
Sargent, G. P.—Coryza, 189.
Scarlatina, vesicular eruption in, 244.
Scarlet fever, prevention of, 764; salcylic acid a preventative, 604.
Scarlet fever tongue, 801.
Scrofulous ulceration of cervical glands, 527.
Serum injections in tubercular phthisis, 594.
Sexes, numerical relation of, 363.
Sexual perversion as phase of evolution, 436.
Shimonek, F.—When is total hysterectomy indicated? 65.
Shipps, W. H.—Traumatic neurosis, 328.
Shoulder, treatment of injuries of, 514.
Shurley and Gibbes, solution for tuberculosis, 342.
Sims, H. Marion—Clinical Lecture, 567.
Skin, grafting, 527; from dead body, 43.
Skin transplantation following excision of lupus, 358.
Slifer, H. F.—Antiseptic medication, 241.
Small, E. H.—Tetany, 584.
Small-pox, cocaine in, 550.
Small-pox, sublimate spray for, 287.
Smith, A. N.—Common colds, 440.
Smoking, suppression of juvenile, 840.
Soaps, medicinal, 387.

Society Reports.
Allegheny County Medical Society, 657; American Medical Association, 625; Mississippi Valley Med. Asso., 38; New York Academy of Medicine, 660; Penn. State Medical, 736; Phila. City Medical, 779; Phila. Obstetrical Society, 159; Southern Surg. Gynæcolog. Asso., 38; Philada. County Med., 819.
Sozoiodol, 706.
Spear, R. C.—Correspondence, 705.
Spectacle-frames, construction of, 377.
Spohn, A. E.—Treatment of carbuncle, 151.
Sponges, preparation of, 835.
Starvation and disease, 344.
State Board of Health, 232; Medical Education Medical Examiners, 374.
Status epilepticus, 713.
Stem pessary, 703.
Sternum for melano-sarcoma, excision of, 479.
Stenosis of cervical canal, incision vs. dilatation, 717.
Still-births, life-saving methods in, 246.
Stimulant in impending collapse, 174.
Stockton, Chas. G.—Clinical Lecture, 530, 727.
Stomach—cancer of, 11; motor insufficiency, diagnosis, 757.
Stomach-tube, appliance to facilitate the insertion of, 401.
Stomatitis, gangrenous, 284.
Stools, green, 32.
Sterility, 441; is it a disease? 399.
Stricture of ileo-cæcal valve, treatment of, 397.
Strophanthine, as a local anaesthetic, 549.
Strychnia—and hot douche in prostrated labor, 720; as a circulatory stimulant, 509, 637; in chronic alcoholism, 793; hypodermic use of, 57.
Strychnine as a heart stimulant in pneumonia, 811.
Subclavian artery compression of, 821.
Sublimate spray for small-pox vesicles, 287.
Sugar—alpha-naphtol test for, 565; phenyl-hydrazin test for, 565.
Sugar quantitive estimates of with Robert's fermentation test 841.
Sulphaldehyde, action of, 177.
Sulphonal—in trismus neonatorum, 644; dangers of, 594.
Sulphuric acid, 433.
Sunflower plantations as prophylactic against malaria, 198.
Suppuration of antrum of Highmore, 332.
Surgeons of National Guard, notice to, 346.
Surgery, drainage in, 414; pelvic, 340, 156, 159; railway, 327.
Sutton, R. Stanburry—letter, 751.
Syphilis—from bite, 386; transmission of, 724; ways in which it may be spread 482; treatment of, 601, 689; baccili of, 564; infection, the expectant treatment in, 498; with lesion of heart and kidneys, 727.
Syphilized practitioners, practice by, 261.
Syringe, aseptic hypodermic, 284.
Sweating feet, treatment, 550.
Sweating of reflex origin, local, 458.
Sympathetic ophthalmia, pathology and treatment of, 593.

Tabes, symptom-complex of, 551.
Tachycardia—513; at menapause 798; belladonna in, 331; cured with electricity, 427.
Tait, statement by, corrected 230.
Take dorsalis, vesica. disturbances in, 551.
Talane University 843.
Tape worm, 738.
Tampon in menorrhagia, 369.
Tannic acid as intestinal antiseptic remedy, 57.
Tape worm, cocoanut, for, 177.
Tatoo marks, method of removing, 835.
Taylor, R. W.—Treatment of syphilis, 689.
Taylor D. J. M., 843.
Teeth—in diabetes, 398; in epilepsy, 136.
Tenotomy, open and subcutanious, 429.
Terpene iodide in diseases of lungs, 336.
Tetanus—and diphtheria, 13; immunity from, 76.
Tetany, 584; etiology of 562.
Tetrahydronaphthylamines, 106.
Thallin, 832.
Thialdine, action of, 167.
Thibet, study of medicine in, 392.
Thomas, C. H.—Spectacle frames, 377.
Thomas, J. J.—Letter, 284.
Thomas, J. J., strychnine as a stimulant, 811.
Thompson, L. R.—Club-foot, 270.
Thyroid, resection of, for exophthalmic goitre, 204.
Tilliacin, 86.
Tinnitus aurium, ætiology of, 832.
Titles, extra, 447.
Tobacco-smoking, 116.
Tobacco, influence on digestion and acidity of urine, 833.
Toe-nail, simple treatment of ingrown, 397.
Tongue in scarlet fever, 801.
Tonsils of children, 169.
Toxine, cholera, isolation of, 765.
Tracheotomy vs. intubation, 785.

Trachoma, treatment of, 681.
Transplantation of tissue from lower animals to man, 514.
Traumatism of chest, 597.
Traumatic neuroses, 757; infection, 527.
Tracheotomy, chloroform in, 307.
Trephining for epilepsy, 58.
Trichinæ, vitality of, 606.
Trichloracetic acid as test for albumin in urine, 471.
Trippe, R. J.—Peritionitis, 67.
Trismus neonatorum treated with sulphonal, 644.
Tritopine, 344.
Tubal pregnancy, anatomy of, 837.
Tubercle bacilli, at point of infection, 646; method of detecting, 315; staining, 175.
Tubercular poison, mode of entry into body, 522; bronchitis, iodoform in, 754; anthritis, excision, 688.
Tuberculine, effects in monkeys, 598.
Tubercule cultures, extracts from, 419.
Tuberculosis, 22, 49, 68, 81, 175, 181, 258;—solution of Shurley and Gibbes for, 342; of larynx, 336; abscesses treatment of, with hot water flushing, 277; treated with injections of iodoform and guiacol, 485: in children, diagnosis of, 559.
Tuberculous milk and diseased udders, 105.
Tumors, cerebral, 167.
Typhoid fever, 3, 61, 126, 263, 655, 740; rash, 105; and consumption, "antifebrinization" in, 117; chloroform in, 636; new methods of treatment, 547; naphtholine in, 509.
Typhus fever, influence of warm enemata, 546.

Udders, diseased, 105.
Ulcer—Gastric, 271; hæmatemesis in gastric, 416; bad effect of poultices for spreading, 484; poultices for spreading, 484.
Umbilical Hernia in children, treatment, 735.
University of Texas Med. Dept. 804.
University of Pennsylvania 805.
University of Buda-Pesth 805.
Uremia in persons apparently healthy, 45.
Uremic poisoning, 99.
Ureters, wounds of laparotomies, 642.
Urethra, congenital occlusion of, 312; stricture, treatment of, 553.
Urethra, remarks on 500 cases of stricture, 834.
Uric acid, piperazidine as a solvent for, 831.
Urine—albumin in, 471; bile pigment in, 168; biliary matter in, 197; test for albumin in, 364, 685; incontinuance of females, massage in 762.
Urology in infantile disease, 725.
Uterine—appendages, removal of, in functional neurosis, 249; hæmorrhage, hydrestis canadensis in, 683; tumors with electricity, treatment of, 464.
Uterine cavity, effect of leeches in, 835.
Uterus—cancer of, 4; fibroids of, 432; galvanism in treatment of diseases of, 403; incarcerated retroflexed pregnant, 535; retroversion of, 567; rupture of, 176.
Uterus curetting of 827.
Uterus, total extirpation of, 836.
Uterus, parturient antipyrin in tonic spasm of, 837.

Vaccination, in France, 419; of children, 388.
Vaginitis, 119.
Vancilla, 608.
Varicose veins, 387.
Varicose leg ulcers, treatment of, 555, 707.
Vaseline, shaving with, 262.
Veasey, C. A.—Ulcerative endocarditis, 154.
Venesection, 305.
Venous hum in neck, diagnostic significance, 758.
Veratrum viride, 297.
Vermont, Medical Colleges of, 237.
Vertebræ, caries of, 97.
Vesicular eruption in scarlatina, 244.
Vesical tumors diagnosis 809.
Viable child at six months and a half, 665.
Virchow testimonial fund. 843.
Virgin, mammary abscess in, 220.

Ward, A. C.—Veratrum viride, 297.
Ward, S. M.—Letter, 226; hemoptysis following typhoid fever, 126.
Warren triennial prize, 290.
Washing, in cold weather, 388.
Washington, W. S.—Peritonitis, 211.
Water, supply, 316; testing, 55.
Water, estimation of nitrates and nitrites in, 804.
Watson, B. A.—Concussion of brain, etc., 614.
Weber, M. J.—Gastric ulcer, 271.
Welker, A. T.—Letter, 202.
What experience teaches one to unlearn, 519.
White, J. William.—Clinical Lecture, 687.
White swelling, treatment, 760.
Whooping-cough, 29, 32; new remedies for, 275; quinine in, 810; treatment of, 52; with tube in trachea, diagnosis of, 486.
Whooping cough, bromoform in, 839.
Wilson, J. C.—Caries of the costal cartilages treated with methyl-violet, 733; anomalous cases of measles, 64.
Woman's Hospital of Philadelphia, 110.
Womb, double opening into, 202; complete} prolapse of, 487.
Women—law of periodical function in, 398; pharmacists, 65; physicians in India, 118; castration, sexual life after, 557.
Wood, crystal coating for, 295.
Wry neck, operation for, 535.

Yale Medical School, valedictory, 766.
Young, J. K.—Diseases of eye, associated with caries of the vertebræ, 97.
Young, S. E.—Correspondence,, 546.

Zinc paste as a dressing, 602.

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Clinical Lectures.

ACUTE BRIGHT'S DISEASE.—TRAUMATIC PLEURISY.—TYPHOID FEVER.—DANGER OF MOVING TYPHOID PATIENTS.

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Acute Bright's Disease.

Gentlemen: The small patient before us, a colored boy, apparently about 10 years old, was brought in by the patrol a few days ago. He had been picked up in the streets in an unconscious condition. It is said that for several hours previous to this he had lain unconscious, and had had several convulsions. On examination on admittance, he was still unconscious. His respirations were irregular and shallow, averaging about eight to the minute; his pulse was 130. The heart's impulse was forcible, as felt over the præcordia. His pupils were moderately dilated, the eyes being turned to the right, but there was no strabismus. He rapidly became conscious, and after two hours was able to talk. All that he complained of was pain in the abdomen; he had been at work on the morning of his attack, running errands. On examination of his urine, it not merely showed the presence of albumin, but also it was found on heating it that it became almost solid; only a little liquid remaining entangled in the coagulum. Delirium followed during the next day and night. The temperature on admission was 97°; on that night it rose to 100°; but since it has fallen gradually to normal except on the third day following another convulsion. On listening to his heart beat, a soft systolic murmur was heard, caused undoubtedly by the rapid action of the heart. There was no evidence of disease elsewhere. At first the boy was given tincture of digitalis, ten drops every four hours, and with this benzoic acid every third hour. As soon as he was able to swallow, he was given a compound jalap powder, a drachm in divided doses, which was followed on the following day by free movement of the bowels. There was still pain in the abdomen, the nature of which it was impossible to determine on account of the condition and age of the patient; but it was not increased by the medicine. On the second day after admission, only two ounces of urine was passed. The next night another convulsion appeared. The boy was unconscious also again on the next day; this was followed by delirium. In the afternoon and evening only four ounces of urine were passed. That night he was given a hot-air bath and a sixth of a grain of the muriate of pilocarpin hypodermically. This was not followed by any great amount of perspiration, although a slight amount of moisture was detected on the skin. Apparently these measures produced no relief of the symptoms; but on the following day the boy felt more comfortable, and passed more urine—12 ounces in the day. His urine is still heavy with albumin; it contains epithelial and granular casts; but it has greatly improved in character. He is now sleeping well, and taking nourishment; his tongue is clearing, he has still some pain in the abdomen, but no delirium or convulsions. From noon yesterday until this morning he has passed 21 ounces of urine; it contains some *débris* and thick purulent-like material, consisting nearly entirely of epithelial cells and casts.

There are several ways for testing for albumin in cases where it is due to inflammatory cause. The acid can be put below in the test tube, with the urine on top; or the urine can be placed in the test tube and the acid rolled below or placed below with a pipette. By this last means of procedure a wider band of albumin can be obtained from the same case than where the urine is

simply poured on top. Another excellent method for the same purpose is to fill the test tube half full of urine and boil the upper half by tipping the tube over an alcohol flame. In this way you will undoubtedly break many test tubes, especially if the flame is in a draught; but it forms a very delicate mode of comparison, the urine in the lower part of the tube remaining unchanged. This method I believe to be the best for detecting small amounts of albumin caused by inflammatory changes. Many other methods, of course, may detect albumin when present in far smaller amounts than does this boiling test; but for daily practical work I wish to enforce the statement I have made.

As to the origin of this boy's illness we are unable to speak positively. We have an indefinite history of a wetting some time ago; but its date and extent are not known. He represents excellently well an attack of acute Bright's in a child. He is restless yet and requires constant watching. The doses of benzoic acid and digitalis will be gradually reduced as the kidneys increase their action; if thorough relief does not appear later in his attack we will resort to hot-air baths again.

Traumatic Pleurisy.

Our next patient is also a colored boy, 14 years old. He was admitted on November 6, with the following history. Eight days before, while playing with some other boys, they placed a rope around his chest, and, throwing its end over a beam, dragged him up in the air a number of times. This produced no pain until four days later, when he experienced a sharp, severe, stabbing pain in the right side, well up under the axilla. On attempting full inspiration, this pain was greatly increased; and since its commencement it has been growing rapidly worse. His temperature, on admission was $104\frac{2}{5}°$, and he lay in bed on his right side, which position gave him some relief. The expression of his face showed that he was suffering intense pain. His respirations, which were short and shallow, ran 36 to the minute; his pulse was over 100. His high temperature was due to moving him into the hospital, and the pain thereby produced; it was too high, even for severe pleurisy in a boy of his age. At the point exactly where the rope had been placed around his chest, there was a marked friction sound. Nothing could be felt. The lower part of his chest gave a good respiratory note. On coughing, many râles could be heard in the lung. At first he had considerable expectoration; the sputa were rusty in color; but there was no blood in clots.

It is a common thing for traumatism to produce pneumonia as well as pleurisy, even when no injury has been done to the rib. The pneumonia is more common than pleurisy alone. The rusty sputa is generally the first sign obtained. In this case the effusion in the chest disguised, to a degree, the signs of the pneumonia; and in the conjoined diseases the one starting or developing first always predominates; the pleural effusion cannot become excessive simultaneously with a solidification of the lung with the pneumonic exudation. This boy coughs only on exertion now; the expectoration of rusty colored sputa has stopped.

The question now arises as to the course of treatment. It is evident that we cannot treat such a case as ordinary pneumonia or pleurisy, with an underlying constitutional or diathetic factor. These cases of traumatism must be kept as nearly as possible in the condition given to a broken bone. The chest movements must be restrained, just the same as in a fractured rib. In this case there has not seemed to be an urgent necessity for such strict treatment. We have given the boy anodynes—the acetate of morphia, $\frac{1}{16}$ of a grain every three hours—together with eight grains of the acetate of potash, to help absorb the fluid and favor its excretion.

I will present another case of pleurisy of similar origin, which shows a not infrequent result, following similar chest injuries. This man, 58 years old, was admitted on November 3. He experienced, in the Spring, a fracture of several ribs. This had not inconvenienced him since, until October, when he was exposed to excessive wet weather, remaining for long periods in wet clothes. There appeared then, a cough, shortness of breath, and a sharp pain through the seat of the former fracture. This is a very common history—the selection of the seat previously injured for the recurrence of a pleurisy. An examination of his chest reveals a few crackling râles at the base of the right lung; his heart and the other lung are normal. There is diminished resonance on the affected side below the nipple, and behind the axillary

line dulness is very marked. This dulness is not changed in area or position by change of posture; this is very likely to occur in these recurrent pleurisies, because the pleural sac is, in parts at least, adherent, and the new effusion is probably sacculated and limited in its amount and extent. There is no rusty sputa as we are likely to have in a fresh traumatic case. It is a free frank pleurisy, with some bronchial trouble. The temperature was higher than we would expect; this was due to the agitation experienced by transmission to the hospital and subsequent physical examination. In such a case, always wait to see if the temperature will drop down without the administration of any marked remedies; it frequently or generally does so. The treatment for this man is the same as in the other case; the acetate of potash being given in fifteen-grain doses and the acetate of morphia in one-third grain doses. In addition poultices, consisting chiefly of mustard, were applied to the chest. These were intended to relieve the pain. The little effusion which existed is going off. Adhesion is occurring at the lower part of the lung. A layer of lymph has been thrown out and is becoming adherent.

Another point, practical in its bearing, occurs to me here. Generally, when you see these cases, the bowels have not been acting for several days, and the question arises, Should you give a purgative? It is always my practice to try to avoid its administration, if possible. It is a painful strain to the patient little able to handle himself properly; so that, if possible, the purgation should be put off. The quiet and rest are more essential. Later not only are enemata of service, but the remedies which drain the intestinal mucous membrane are indicated.

Typhoid Fever.

The next man, 22 years old, was admitted November 1, with the diagnosis of typhoid fever. He is a printer, and was never ill before. A week prior to his admission, dizziness occurred, with headache, loss of appetite, malaise and aching in the joints and bones; and his bowels were very constipated. Two days before his admission he had an attack of nose-bleed. On examination some harsh breathing was noted under the right clavicle; there were no bronchial râles; the pulse was acting rapidly; and there was a slight systolic murmur at the apex. This murmur has since disappeared. His liver was normal in its area, but the spleen was slightly enlarged. His temperature was 99° on admission; and, on examination of his skin, four or five suspicious spots were seen over his abdomen. After pressure, these spots appeared with rekindled redness. The fresher ones came back promptly, the older ones more slowly. At present his abdomen is not distended, and there is a little gurgling in the right iliac fossa. Don't seek for this latter symptom. It is much better to do without it. You may easily punch through the thinned and ulcerated intestinal walls in searching for it; but if on touching the surface gently you get the symptom, so much the better. It shows the presence of air passing through fluid. Active manipulation of the abdomen at this point is not only dangerous to the patient, but, in liquefying solid matter and producing artificially gurgling, may be deceptive for diagnostic purposes. The tongue is swollen and coated; it shows a wedge-shaped clearing area. The pulse is not high; the respiration is even; and there is a tendency of the temperature to return to normal; in fact fourteen days from the day of first complaint it has become in the morning sub-normal. The spots which you see here, which have lasted for many days, are seen unusually late.

The treatment of this patient has been of the simplest character. Enemata, to prevent impaction—for his bowels have seldom moved—have been administered. He is taking dilute muriatic acid and quinine. He is being given a liquid diet, and the surface of his skin is regularly sponged.

In cases of typhoid fever, this has been the experience of the Pennsylvania Hospital: Brought into the hospital before the end of the first week, unless the cases are virulent, they are likely to terminate favorably. In the same grade of cases brought into the hospital in the second week of their disease, the mortality is increased threefold. When brought in in the third week, the mortality is terrific; it is a miracle if the patient does not die. The experience of London hospitals has been the same, especially at the London Fever Hospital. The practical lesson of this is to move your patients early. If mistaken in your diagnosis, no harm has been done; your patient can walk out of the hospital in a few days, if he does not show the existence of typhoid; but waiting until you are certain of your diagnosis, you

are increasing the risks to your patient tremendously if you intend to send him to a hospital. In a case which you have seen late in the course of the disease, no matter how uncomfortable it may be at home, no matter how poor the bed or room and wretched the nursing, remember the fatality consequent upon moving a patient.

CANCER OF THE UTERUS.

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Gentlemen: The first patient I bring before you is a German woman, fifty-four years old; her father, one sister and two brothers died of phthisis. She came to this country at the age of fifteen years; was married and has had eight children. Eight years ago she had syphilis. For the last two years she has been suffering with severe pain in the back, and occasional prolapse of the rectum. During the last two months her suffering has become greatly increased; the gravest symptom being periodical uterine hemorrhages, and recently, the discharge of feces through the vagina, indicating the development of a recto-vaginal fistula. The symptoms—pain, hemorrhage and fecal discharge from the vagina—are her most serious disorders. Upon examination, I find a thickening of the walls of the orifice of the vagina; and, as I proceed, I meet with ulceration on the posterior surface, from which an offensive discharge takes place when the parts are subjected to pressure. This thickening and ulceration extends from the vagina to the uterus; so that it is difficult to define one from the other; and an opening can be determined between the vagina and the rectum through which the feces pass. The disease has evidently developed in the uterus and extended from it to the vagina, involving more particularly the left lateral and posterior walls, although the anterior wall has not entirely escaped. As the disease primarily involved the uterus, we may have in addition a recto-uterine fistula.

I regret that it is so difficult to exhibit the lesions present in a case of this kind; but I shall take occasion to exhibit to you the *post-mortem* specimens removed from a woman who died in the institution two days ago. The woman was thirty-seven years of age, a German and a cook. She menstruated regularly, and had had two children. During the latter part of her life she suffered with severe pelvic pain, vaginal hemorrhage and profuse discharge. One year ago she began to experience severe pain at the menstrual period; later the menstrual flow was excessive; and within the last few months an inter-menstrual hemorrhage occurred, followed by a profuse offensive discharge. Her bowels were constipated, her urine was mixed with blood and for some months feces had passed through the vagina. At the autopsy the heart and lungs were found healthy; the pelvic viscera were matted together, and there was extensive involvement of the lymphatic glands in the pelvis; the right ureter was distended to the size of a finger, and, upon being broken, was found to be filled with pus. The pelvis of the right kidney was dilated and contained considerable pus; the left kidney and left ureter were normal. Upon examination of the vagina, it was found that the posterior surface was completely destroyed, forming a large opening into the rectum, through which the contents of the bowel passed; infiltration extended laterally quite extensively upon the right side of the vagina, and had undoubtedly given rise to obstruction of the right ureter, causing the accumulation of pus within the kidney and ureter, inducing at first a hydro-nephrosis, and later a pyo-nephrosis of the kidney. The uterus was found free from disease; which indicated that the vagina was the seat of its origin.

Cancer of the uterus is a very frequent disease. This organ is the seat of cancer in one-third of the cases of malignant disease in women. Primary cancer of the vagina is exceedingly rare. In the majority of cases the disease extends from the cervix to the vagina. When the disease originates in the vagina, it is usually of the ephithelial form and is more rapid in its progress; the walls of the adjoining viscera being thin, they are soon perforated, and the bladder or rectum opened. Where it is seen sufficiently early, the proper method of procedure would be the removal of the diseased part, even if it were necessary to open into the adjoining viscus to accomplish it, and to bring together the denuded surfaces with sutures. They are hopeless cases for treatment, as the disease, with few exceptions, soon recurs.

Cancer originating in the body of the uterus is also of rare occurrence, it occurs in

about two per cent. of the cases in which the uterus is the seat of the disease. It is quite evident why this should be true; the cervix is that portion of the uterus which is most likely to undergo injury during parturition, and the efforts on the part of nature to restore such lesions result in the formation of tissue of lower vitality, which, under favorable occasions, undergoes increased cell proliferation. While it is true that malignant disease may occur in women who have not borne children, it is rare, and it occurs with the greatest frequency in women who have borne a number of children, and who have undergone lesions of the cervix as a result. The disease may occur at any age, from twenty to seventy years. It takes place, however, with the greatest frequency at or near the climacteric. It may begin upon the mucous surface, in which the cell proliferation leads to the formation of large cauliflower growths, which may fill up the vagina. In these the vessels are much enlarged; their walls are thin and without muscular coat, so that they rupture easily; and as they have no contractile power, hemorrhage is a marked symptom of the disease. In other cases, the walls of the cervix become rapidly infiltrated, and are found to be hard and dense, giving rise to most excruciating pain. This form is known as that of scirrhus. Cancer of the uterus seems to progress with greater rapidity when it occurs in the young. It takes place in such cases where there has been a family predisposition to the development of tubercular trouble, so that it is quite possible that the peculiar condition of health, of the individual, favors the rapid progress of the disease.

The prominent symptoms of cancer of the uterus are pain, hemorrhage and offensive discharge. Of these, hemorrhage is usually the first, and may make its presence known by increased flow at the menstrual periods; later the hemorrhage may take place at irregular intervals, or give rise to a continuous bloody discharge. Frequently the patient suffers from a profuse, thin, watery discharge, which has somewhat the odor of decomposing flesh. Pain, while in many cases a marked symptom, is not a constant one, some patients, indeed, going through the whole course of the disease without suffering any distress. Pain, when felt, is usually in the region of the uterus, and radiating from it. As a result of the profuse bleeding, the constant discharge, and a severe sleep-destroying pain, the individual soon becomes emaciated, presenting a wearied look, often a straw-yellow color, producing what is known as cachexia. This condition is due, in a great degree, to the chronic poisoning of the system of the patient by the absorption of septic material, which takes place from the pockets of the decomposing tissue. That this has a marked influence in its development, is evident from the fact that those patients who undergo operation, by which this tissue is removed, temporarily regain their color and healthy appearance to such a degree as to lead their friends to hope that a mistake has been made as to the character of the disease.

Patients suffering with this disease appeal to our sympathy. There is no more distressing position to be placed in, than to be physician to a lovely woman, who is the victim of a disease that has progressed to such an extent as to render it ineradicable. It is very important, therefore, in every case presenting symptoms of a suspicious character, to proceed, at once, to a careful examination of the patient, and where she is evidently suffering from incipient development of malignant trouble, to resort to operative interference. It is now well recognized that cancer in the uterus, as in the mammary gland, is, in the beginning, a local disease; and if it is attacked before it has extended to the surrounding structure, we may hope to afford our patient immunity against its return. We have not, however, the same opportunity of following the disease when the uterus is its seat, as where it has involved the mammary gland.

In the latter organ, it is accepted as an established rule, that removal of the corresponding axillary glands should accompany the removal of the mammary gland; but we cannot carry out such a rule in operations upon the uterus. The cases in which we may hope to proceed to a radical operation where the uterus is the seat of the disease, are necessarily limited. It is only in those cases in which the disease is confined to the uterus, and in which there is no evidence of the involvement of the vagina or extension to the broad ligaments, that we may hope to be successful in extirpating the disease. Yet even in such cases, we cannot say when the disease may have extended from this organ, through the lymphatics, to the glands of the pelvis; and when this is the case, a return of the disease is certain to take place.

Now, two plans of procedure are advocated for this—high amputation of the cervix, and entire removal of the uterus. I am aware that in making this statement, I do not name amputation by the ecraseur, by the galvanic ecraseur, by the scissors or by the knife; such operations hardly deserve the name of being palliative, as it is very rarely that they succeed in arresting the progress of the disease. The tendency of the disease is to extend continuously upon the tissue first involved, and from it to the contiguous tissue. Any operation, therefore, which does not remove the diseased tissue entire does not deserve the name of a radical operation. It is a well recognized fact that in operations upon the mammary gland for malignant disease, every vestige of the gland should be removed; it seems equally important to us that in operations for the removal of the malignant disease of the uterus, every vestige of that organ should be extirpated, and that when this is done the opportunities for benefit to the patient are enhanced.

Extirpation of the uterus is not a new operation, having been done as early as the beginning of the present century; but the results of the operation were so grave as to lead to its discontinuance. West quotes twenty-five cases, twenty-three of which proved fatal. Freund, in 1878, revived the operation of removal of the uterus, but performed it by the vagino-abdominal method. Czerny, in 1879, extirpated the uterus through the vagina, but was so little impressed with the value of the procedure, that his subsequent operations were done by Freund's method; and he did not recur to vaginal operation, until several successful operations had been done by others. Freund's operation was attended by so great a mortality—79 per cent.—that it has been discontinued. The vaginal procedure has continued to grow in favor, until now, the statistics of many hundred operations can be compiled, and nearly a hundred operations enumerated by a single individual. With improved methods of procedure the operation has been expedited, and its mortality greatly decreased. When the operation was performed with ligation of the broad ligaments, with suturing the peritoneum and the vaginal surface, and with complicated methods of drainage the length of time required made the operation a severe test to both patient and physician. Now, when the uterus is encircled by an incision, the vagina pushed off anteriorly and posteriorly until the peritoneum is reached, the uterus depressed into the vagina, and the broad ligaments clamped upon either side, the operation can be performed with great expedition and with less influence upon the system of the patient.

I have had some six cases in which I extirpated the uterus, and five of the patients are now living. The operation has been performed in periods of time varying from fifteen minutes to one hour and a half. The longest time was taken in the first operation, in which, in my efforts to avoid the bladder, I became lost in the anterior wall of the uterus, so that much time was required for the completion of the operation. In the last patient, the uterus was readily drawn down and the operation was completed in fifteen minutes. The broad ligaments may be secured with forceps, or with clamps, such as I show you, in which they are firmly held, and there is no possibility of the tissue slipping or of hemorrhage occurring. These clamps have been objected to, as being unnecessarily heavy, but when we consider that there is a certain amount of sloughing of the tissue, which is compressed in the clamps, this does not seem to be a reasonable objection, as by their weight the broad ligament is brought down and held, so that the peritoneum is glued together before the forceps are removed, permitting the slough to come off outside the peritoneal cavity. Drainage is also favored by the weight of this instrument, and it is still further promoted by the introduction of a tent of iodoform gauze between the two instruments. The clamps are removed at the end of twenty-four hours and the gauze tent at the end of forty-eight or seventy-two hours. The cavity of the vagina is subsequently irrigated by a disinfectant solution.

In the hands of men like Leopold the mortality of this operation has been reduced to about four or five per cent.; and for this reason some of those who originally objected, now advocate it as the preferable plan of procedure. As I have already said, however, it is of limited application. It should not be performed where the disease has extended beyond the uterus, as indicated by infiltration of the broad ligaments. It is not wise; it is not right, to subject a woman to an operation that is attended with a certain amount of danger and with a great amount of anxiety, when it is *certain* not to result in the eradication of the disease. In

those cases, where extirpation is unjustifiable, it becomes difficult to say what should be our method of procedure. Operations of curetting the uterus, and the subsequent application of strong caustics have been highly extolled. This method as introduced by Sims, has been extensively practiced by Van de Warker. I must confess, however, that my own experience in this plan of procedure has been exceedingly unsatisfactory. It consists in curetting and cutting away the diseased tissue until hard and firm tissue is reached, followed by the application of a solution of persulphate of iron upon tampons of cotton, so that the hemorrhage is arrested. At the end of forty-eight hours the clotted blood is removed and the cavity thoroughly irrigated, and this is followed by the application of a caustic. For this purpose chloride of zinc, bromide, and acid nitrate of mercury are used. The chloride of zinc is preferred by most surgeons. It should be used in strong solution, from six drachms to one ounce of the salt to one ounce of water. This is applied by wetting a number of small tampons of absorbent cotton in the solution, and, after squeezing them dry, applying them over the surface to be destroyed. The caustic agent has a greater affinity for the diseased tissue than for the healthy, consequently a marked slough results from the uterus. It is very important that the vaginal surface and the healthy tissue should be carefully protected from the superfluous fluid. For this purpose the walls of the vagina are covered with an ointment consisting of one or two drachms of bicarbonate of soda to an ounce of cosmoline. After the tampons have been carefully applied, they are covered with a dry absorbent cotton, and then with a tampon of cotton wet with a saturated solution of bicarbonate of soda. This solution neutralizes the chloride of zinc with which it comes in contact, and prevents its destructive effects. But even with all this care, it is sometimes difficult to avoid superficial burning and sloughing of the vagina. The operation at best is but a palliative one, and where the disease is not thoroughly eradicated its subsequent progress is rapid.

—Echujin, a glucoside allied to ouabain and strophantin, is the latest addition to the interminable list of African arrow poisons. It is derived from an apocynaceous shrub, adenium boehmianum.

COMMUNICATIONS.

SUPRA-PUBIC CYSTOTOMY IN A CASE OF ENLARGED PROSTATE.[1]

BY W. H. H. COBB, M. D.,

GOLDSBORO, N. C.

Without entering into a history of the varieties of prostrate trouble, or the numerous operations for their relief by surgeons in Europe and in this country—for this has been ably and fully described in a paper before this Association in 1888, by Dr. R. D. Webb—I will simply report a case of enlargement of the right lobe of the prostate, with cystitis and symptoms of vesical calculus, entirely relieved by the operation of supra-pubic cystotomy performed after the method of my friend, Dr. Hunter McGuire.

The patient was a farmer, married, 49 years old, of a rheumatic diathesis, who dates his troubles back to 1881. While attending to the duties of Register of Deeds, he carelessly allowed over-distention of his bladder, and has suffered more or less since that time. In 1882 he had an attack of nephritic colic and passed a small calculus, similar in size and shape to a grain of wheat, and has had slight symptoms since. On three different occasions he passed dark gritty deposits. In 1883 he suffered much inconvenience and some pain in urinating. In 1887 he passed a dark, gristly bloody substance about the size of a corn-pea, accompanied by much pain and bloody urine. For the past three years he has suffered much with cystitis in a very aggravated form, with great pain and difficulty in micturition, his urine containing much blood, pus and mucus. He had consulted numerous physicians, besides taking various patent medicines, receiving but little temporary relief. His efforts to relieve the bladder and bowels were tormenting, and night after night was spent in walking over his premises, with groanings so severe as to disturb his neighbors. There was a constant desire to relieve the bladder, dull pain at the hypogastrium, and pain in the glans penis, a feeling of weight in the rectum with sudden stoppage of urine, which change of position would often relieve, his uncomfortable and painful

[1] Read before the Southern Surgical and Gynecological Association, at Atlanta, Ga., November 12, 1890.

sensations being increased in severity by walking, riding or driving.

This was his condition when he consulted me, June 15, 1890. From this history of the case I suspected vesical calculus, but failed upon examination with the sound to detect any stone; however, a digital examination per rectum disclosed the right lobe of the prostate greatly enlarged, rough, indurated, and exceedingly tender and sensitive. Notwithstanding the failure with the sound to detect a stone, I still thought from the man's symptoms that he might have a stone at the base of the bladder in the posterior prostatic pouch. So distressing were his symptoms that I feared longer delay would result in uretero-pyelo-nephrosis; and so, after consultation by letter with Dr. Hunter McGuire, and with Dr. W. H. H. Cobb, Jr., who saw the case with me, I decided upon a supra-pubic cystotomy as the only hope of securing permanent relief.

On the night of June 22, I gave the man a saline purgative, followed by a warm-water enema early next morning. On the morning of the operation, June 23, I gave five grains of quinine at 5, 6 and 7 o'clock. The patient having been placed upon the operating table, all hairs were shaved off from the pubes to the umbilicus, the parts were thoroughly washed with soap, hot water and nail brush, then with 1 to 2,000 solution bichloride of mercury, our hands, instruments and sponges being rendered thoroughly aseptic. Drs. J. F. Miller, Thos. Hill, M. E. Robinson and W. H. Cobb, Jr., were my assistants.

The patient was fully æsthetized with chloroform, and his bladder was washed out thoroughly through a soft rubber catheter with a four per cent. solution of boric acid, until the returning fluid was perfectly clear and odorless. Having no rectal bag, a soft rubber pessary with a stem was inserted up the rectum, after dilatation, and about ten ounces of warm water were injected in same. Now six ounces of four per cent. solution of boric acid were thrown into bladder through a soft rubber catheter, and retained by rubber band around the penis, while the solution distended the bladder so that it could be distinctly felt above the pubes. Instruments, consisting of scalpel, tenaculum, small forceps, retractors, etc., were placed in a tin tray with carbolic acid and hot water 1 to 40. I began three inches above the symphysis pubis, and made an incision down to the pubic bone, through the skin, fat and cellular tissue, down to the linea alba, which was divided with an incision half an inch shorter from above, the recti muscles were next separated with the handle of the scalpel down to the fascia transversalis, carefully keeping in the median line, using retractors to separate the recti muscles. The fascia transversalis was now incised, shortening the incision another half inch from above. The fat and cellular tissue between the transversalis fascia and the bladder having been separated with the handle of scalpel, the bladder was brought plainly into view. It was caught up with a tenaculum and drawn forward, and a free incision in the lower portion was made admitting the left index finger, which was introduced into the bladder as the scalpel was withdrawn.

The bladder having been thoroughly explored, I must confess that I was disappointed in not finding a stone in the cul-de-sac posterior to the enlarged prostate, as the previous history of recurring calculi, with severe cystitis, pains in the glans penis and sudden arrest of flow of urine, all combined, seemed strongly to warrant the belief in the presence of stone in the bladder, notwithstanding the failure to detect it with the sound. Careful exploration of the bladder failing to reveal a vesical calculus, tumors or other abnormalities to remove, the parts were thoroughly cleansed with antiseptic solution and a No. 15, American scale, soft rubber catheter was introduced into the bladder through the abdominal incision, the distal end of the catheter being placed in a cup by the side of the patient. Three stitches were introduced through the skin only to approximate to some extent the gaping edges of the incision, and the wound was now dressed antiseptically, iodoform, bichloride gauze and absorbent cotton being used. The presence of the catheter in the abdominal incision produced so much vesical tenesmus that it could not be retained in place continuously, and during its absence from the bladder a large sponge was substituted for the absorbent cotton to catch the constantly dribbling urine, which was removed, thoroughly cleansed and rendered antiseptic as often as it became saturated with the urine. The temperature rose to 99½° F. on the evening of the operation, and 100½° F. on the following evening, and at no time

did the pulse exceed 82. Both temperature and pulse became normal on the third day after the operation and remained so from this time on. Hot water enemata were used daily to keep the lower bowel open and to aid in relieving pelvic congestion and in reducing the enlarged prostate. For two weeks the bladder was washed out daily with a four per cent. solution of boric acid, and afterwards on alternate days for about two weeks longer; and the patient's urine was kept acid.

About two weeks after the operation the urine ceased to dribble, and when bladder felt uncomfortably distended, the urine was drawn by the patient, who inserted a soft rubber catheter through the abdominal opening, thus affording the urethra perfect rest. Three weeks after the operation I introduced a hard rubber tube, size 15, American scale, 2½ inches long, and allowed it to remain in the abdominal opening the greater part of the time; the patient withdrawing the plug about every three hours to relieve the bladder. At times, in the patient's movement of his body, the recti muscles would suddenly contract and expel the tube; and so strong were these contractions, that great pain would be induced in attempting the re-introduction of the tube. At no time was the patient able to relieve his bladder through this artificial urethra save with the aid of the catheter or tube. At intervals of every two weeks the prostate was examined and found to be decreasing in size, softening in consistence, and assuming its normal appearance. At the expiration of two months (August 23) I found the prostate perfectly normal, with no symptoms of cystitis, and withdrew the plug, allowing the fistula to unite, which it did in about ten days. My patient now performs the acts of urination and defecation without the slightest trouble, expresses himself entirely relieved, and is following his usual vocation.

REPORT OF A CASE OF LEPROSY.[1]

BY J. H. BERTRAND, M. D.,
DE FOREST, WISCONSIN.

To the great majority of persons leprosy possesses only an historical interest, and it is classed by them in the same category as pestilences and plagues, which formerly devastated countries, but which now are extinct. But, unfortunately, it cannot be so regarded; it is a living and actual reality which the case I have brought before you to-day is a sad proof of.

Case 1. M. M., single, a native of Norway, came to this country at the age of seven years and is now forty years old. The family history on the father's side is good. His father is still living and eighty years old. His mother died of leprosy in this country, at the age of fifty-six years, after an illness of seventeen years. An uncle on the mother's side also died of leprosy. During the first seven years he was in this country he enjoyed good health; at the end of that time, when he was fourteen years old, the disease first made its appearance. The onset was sudden, without any prodromal symptoms. Simultaneously with the appearance of pale, bluish-red spots over the trunk and extremities, chiefly over the extensor surfaces, came chills, fever, loss of appetite, and great prostration, with severe pains in the upper and lower limbs, which was diagnosticated as rheumatism by his physician. The maculæ were present for about two years, when they gradually disappeared, leaving the skin apparently as it was before. During that time they underwent no alteration except to change to a brownish hue. About eighteen months after the onset of the disease, hyperæsthesia made its first appearance, first at the site of the maculæ, and gradually spread over the extremities with increasing intensity. This condition was present for about a year and a half, when it was slowly replaced by anæsthesia, which came on in the same order as the hyperæsthesia, beginning in the maculæ and gradually extending. Towards the close of the third year the man's general condition commenced to improve, the pains in the joints and limbs diminished, and he became able to leave his bed; but it was with difficulty that he could get about, owing to ankylosis of the knee and ankle joints in both limbs. Both wrists and all the small joints of the hands were also ankylosed. The knees and ankles regained their normal functions in about eight months, and he has been able to be about with comparative ease ever since. The wrist joints have only partially recovered; but none of the smaller joints have improved. His condition then remained fair for about seven years, so that he could do light farm work, when he had another period of sickness, which he describes as being like the first attack, and

[1] Read before the Central Wisconsin Medical Society, September, 30, 1890.

which confined him to bed for another three years. Since that time, with the exception of an occasional short interval of a few days, he has been sufficiently well to be up and about up to the present.

During the whole course of the disease there has been no lesion of the mucous membranes nor any tubercles. Whether there has been any thickening of the nerve trunks I have been unable to learn.

The above is substantially the history which this patient gives. His present condition is as follows. He is emaciated and anemic, and his muscles are wasted away. His skin is atrophied, thin, shining and slightly drawn over the subjacent parts. There is no hair on his face. His senses of smell, taste and hearing are normal, but his right eye has been destroyed by an ulcerative process which is still going on, but which is not now painful. The ulceration has destroyed the cornea and sclerotic, but closed up before all of the intra-ocular fluids escaped. New deposits occurred on the surface, forming firm cicatricial tissue, but not sufficiently strong to prevent protrusion of the fluids, so that now there is a dense, horn-like staphyloma which protrudes for about half an inch beyond the eyeball. There is no hyperæsthesia at present, but there is anæsthesia of the hands and arms as far as the elbows, and of the feet and legs up to the knees. There is no regular or symmetrical arrangement of the anæsthesia, nor does it seem to follow the course of the nerves, but affects the entire extremities up to the first large joints. It is so perfect that the patient has himself cut off some of his toes that were falling off, without feeling any pain, and he has on many occasions been severely burnt by unconsciously placing his hands in contact with articles that were hot. Great changes have taken place in the hands and feet from atrophy of the bony, muscular and nervous structures, leading to deformity, ulceration and loss of all but four of the toes. The muscles and tendons of the hands are atrophied and contracted, and all the small joints stand out distorted and rigid, which gives the hands very much the same appearance as is presented in arthritis deformans. Under the right foot there is an ulcer, which has been suppurating for some time, and through which pieces of necrosed bone are occasionally discharged. All of the toes, except the fourth one, have fallen off of this foot. On the left foot the big and little toes are gone.

New York Correspondence.

NEW YORK LETTER.

New York Academy of Medicine.—Bullet Wound of Brain.—Recovery.—Pylorectomy with Gastro-Enterostomy, for Cancer of the Stomach.—Papillitis.—Orbital Optic Neuritis.

Among the more interesting items of the section work at the New York Academy of Medicine for the week ending December 20, 1890, may be mentioned a case reported to the Surgical Section by Dr. J. A. Wyeth. He said that on October 30 a school boy was brought to Mt. Sinai Hospital having a short time before been accidentally shot in the head with a pistol of No. 22 calibre, in the hands of his brother. The shot had been fired at a distance of about three feet and directly in front. The ball had struck the forehead. Beyond profuse hemorrhage and severe pain, there had been no immediate symptoms. On admission the boy was calm and rational; pulse good. About one inch above the middle of right eyebrow a small round wound existed, the edges being depressed. Around it there was some slight swelling. Scattered spots of powder were present in the skin of the face and the clothing was covered with blood. Vision was good in both eyes. The boy had walked into the hospital without assistance. He had been taken immediately to the operating-room. He was there etherized and, the external parts having been thoroughly cleansed, an incision two inches long was made at the site of the bullet wound and parallel to the eyebrow. The periosteum was raised and loose pieces of bone were found in the wound, consisting partly of spiculæ of considerable size from the inner table. Fluhrer's probe was passed into the wound to a distance of a quarter of an inch. The patient had then begun to vomit. A finger was placed over the wound, and on this being raised there was a sudden gush of dark clotted blood and particles of white brain substance. The wound was washed out with bichloride and packed with iodoform gauze secured with a tight bandage. On November 3 the boy's temperature had risen to 104°, and there had been some delirium. Ice bags had been applied to the head. On the following day the wound, on being dressed, was found to be aseptic. After this dressing the temperature had

fallen to a little above normal and had so continued. On November 8, upon removal of the gauze, about half an ounce of blood-clot and broken-down brain substance had welled up from the opening. No evidence of any suppurative process had existed in the discharged material at any time. During the progress of the case the patient had experienced more or less pain in the region of the occipital bone and in the right ear. He had continued to improve and on November 25 his temperature was reported as normal, and the ice coil was stopped. On December 7 the wound was found to be entirely healed and the patient was suffering no pain; he was bright, cheerful and did not seem to suffer any inconvenience from the loss of brain tissue or from the presence of the bullet in the cranial cavity. Care would be taken to keep him quiet for some time yet in order to give the bullet the best possible opportunity to become encysted. The speaker wished to give his late house-surgeon, Dr. Weber, due credit for his successful management of this interesting case.

In the discussion which followed, the opinion was freely expressed that the Bell Telephone Co. should be again urged to withdraw its obstructive decision, which prevented the utilization of certain processes for the localization of bullets within the cranial cavity, and Dr. Gardner explained that he had found out a method by which the ordinary telephone connections might be arranged to do the necessary work, and

Dr. W. T. Bull then related the histories and the details of the operations in three cases of cancer of the stomach. He thought that it was strange that in this country where so much good work had been done both scientifically and practically in abdominal surgery, so little effort had been made for the cure of cancer of the pylorus. It was thought that the operation of pylorectomy had been simplified by the introduction of Senn's plates, and that the mortality would be much diminished. Another departure from the typical resection was the combination of pylorectomy with gastro-enterostomy, the cut edges of the stomach and duodenum being shut off so as to form a cul-de-sac, and the anostomosis being made between the stomach and the jejunum. This has been the method employed by Dr. Bull in his three cases. In the preparatory treatment the stomach-pump was employed after the patients were under the anæsthetic. This Dr. Bull thought a more effective way of emptying the stomach, than the old method of several washings out previous to the anæsthetic. The median incision had proved the most satisfactory, and was to be preferred to any other. He used no clamps on the stomach or duodenum to prevent escape of contents. The fingers of an assistant he considered more satisfactory, especially if with the aid of hooks or loops of silk the divided ends of the viscera were kept elevated in a vertical position. A plug of iodoform gauze was introduced into the duodenal opening, and a flat sponge in the stomach. There was but slight bleeding from the stomach or intestinal wall, and that which followed the incision for the anastomotic opening was effectually controlled when the catgut rings were approximated. The loop of jejunum was shut off with strips of iodoform gauze while the anastomosis was being made. The continuous catgut suture through the mucous membrane, reinforced by interrupted sutures, were used to close the cut edges of the stomach and duodenum. In using the rings Dr. Bull always added to the silk sutures, which held them in apposition, a line of continuous suture, with an isolated suture where he thought it necessary. He looked upon the rings, not as an absolutely sure method of uniting serous surfaces, but as a most convenient adjunct to a carefully applied peritoneal suture. In all of his cases the gastro-enterostomy had been perfect in point of accurate and secure apposition. One of the patients operated upon by the speaker was now alive and at the last hearing was in good health. He thought that the fatal result in the other two cases could be traced to faults in the technique; in one case, at least, there was no doubt of this, as the autopsy showed that a sponge had been unfortunately left in the stomach.

Statistics showed that out of some thirteen hundred cases of cancer of this region one-half had involved the pylorus. Half of these again were uncomplicated by any involvement of the glands. Therefore half the cases of pyloric cancer were really amenable to treatment by operation. He believed that death in these cases often took place from the effects of the mere mechanical obstruction long before the disease had exhausted the patient. The hydrochloric-acid test and other means now at disposal for careful and accurate diagnosis in these cases should render an early interference possible and then with perfected technique

he thought that the operation of pylorectomy might be raised from its present position to that of a life-saving and life-prolonging procedure.

Dr. Robert Weir after critically analyzing the mortality percentages after the operation of gastro-enterostomy as against those of resection of the pylorus, thought that the latter operation had been performed a sufficient number of times and had been attended as yet by such fearful mortality, and had proved of such little use in prolonging lives that it ought now be relegated to a place among the experimental procedures.

Dr. Robert Abbé thought that if the operation of resection of the pylorus had only yielded fifty per cent. of satisfactory results, and took three hours to perform, then no surgeon of only general experience and ability should attempt it. Gastro-enterostomy, when its technique was more thoroughly written upon and more properly illustrated, should be possible to any man who could handle knife, scissors and needles.

Dr. Bull did not wish to be understood as advocating resection of the pylorus in cancer of this region, but thought it was the duty of surgeons to undertake the operation when there was a chance of success attending their effort.

The proceedings at the last stated meeting comprised the consideration of certain lesions of the visual tract from the eyeball to the cerebral cortex. In this relation Dr. C. S. Bull, in a paper on Papillitis, expressed the opinion that the most common cause of this condition was intracranial disease and that of the intracranial lesions tumor was the most frequent. The frequency and severity of the papillitis did not seem to be materially influenced by either the nature, the size, or the location of the tumor.

The next most frequent cause was meningitis, then followed abscess of the brain, hydatid disease and softening from thrombosis or embolism. Papillitis was also occasionally met with in acute diseases of the spinal cord. Dr. Bull then gave a synopsis of the various views as to causation which have been from time to time held and promulgated by distinguished authorities. In summarizing his own consideration of the subject, the speaker said that optic neuritis, limited to or most intense in the optic disc, might occur without any apparent intracranial disease. Pure papillitis was known to occur in simple anemia. It seemed therefore fair to conclude that the intra-ocular end of the optic nerve was a structure peculiarly prone to inflammation. It was a difficult matter to connect papillitis with increase of intracranial pressure for it was the rare exception in chronic hydrocephalus, where the intracranial pressure was raised to the highest point of which we had any knowledge. On the other hand in cases of intracranial tumor with papillitis there might be no sign of increased intracranial pressure during the life of the patient. There might also be signs of increased intracranial pressure in cases of tumor without papillitis. If we rejected the theory that pressure on the cavernous sinuses was the immediate cause of this condition we could not absolutely ignore its influence on the retinal circulation. The great distention of the veins and the narrowing of the arteries took place mainly when the inflammation had reached a high degree of intensity and these facts pointed to the inflammation in the nerve as the cause of the strangulation by pressure on the vessels. This view was confirmed by pathological investigations. The conspicuous constriction of the vessels was always in the papilla in front of the sclerotic. The most intense signs of strangulation might be seen in cases in which there was no reason to suspect the presence of intracranial disease. Distention of the optic sheath was frequently met with in cases of tumor with papillitis. It might also be absent in cases of tumor with internal hydrocephalus. It had been suggested that the fluid might be found within the sheath itself. If the sheath was the main lymph channel by which the fluid was conveyed from the eye, its distention in optic neuritis by fluid escaping from the papilla was easily understood. But there was good ground for believing that the fluid found in the sheath passed into it from the subarachnoid space. Dr. Bull said he really knew very little of the relation which might exist between dropsy of the sheath and optic neuritis. The occasional occurrence of papillitis without it showed that it was neither the invariable nor the chief mechanical cause of papillitis. It therefore seemed proper to draw the inference that we could not decide in any given case against the existence of a descending neuritis from examination of a small portion of the trunk of the optic nerve, and that a pathological change in the nerve deviating but slightly from the normal state might convey a condition of irritation to the eye which was sufficient to set up actual papil-

litis. It also seemed proper to draw the following conclusions in regard to the development of papillitis in intracranial disease: (1). In cases of cerebral tumor, evidence of descending inflammation may be traced in the sheath or nerve much more commonly than is generally supposed, while in cases of meningitis the evidence of descending inflammation is almost invariable. (2). The resulting papillitis may be slight or may grow intense, but we are ignorant of the cases which bring about this difference. (3). The mechanical congestion in these cases of papillitis does not always result from compression of the vessels behind the sclerotic ring, but does always follow compression from inflammatory exudation in the papilla. (4). Slow increase of intracranial pressure has no effect on the retinal vessels, but sudden increase of such pressure may intensify a papillitis originating in some other way. (5). Distention of the sheath alone is probably not sufficient to cause papillitis by its mechanical effects, but it may intensify the process otherwise set up.

In a paper on optic neuritis, including alcohol and tobacco amaurosis, Dr. A. Knapp said that the cases in which people notice a haze, a blurr, even a perfectly dark patch in the centre of their field of vision, known under the name of central amblyopia or central scotoma, as well as those cases in which persons lose their sight in one or a few days without exhibiting any ocular or general disease to account for it, were explained more than twenty years ago by A. Von Græfe and Theo. Leber. They supposed the condition to be an inflammation of the orbital parts of the optic nerve, retro-bulbar neuritis. This hypothesis has since been proven to be a reality by anatomical investigations. Retro-bulbar neuritis might be idiopathic or the result of different kinds of intoxication, alcoholism, nicotinism, lead poisoning, diabetes, syphilis, etc. The condition might take on an acute or chronic form. A number of very interesting microscopic specimens were exhibited to the society. One showed the central interstitial neuritis in the period of nuclear infiltration, another in the stage of connective tissue hypertrophy. The process was characteristic by the limitations of its area of inflammation, circumscribed and triangular near the disc. In one specimen the changes passed like a band from the temporal border of the nerve across to the nasal side. This explained how the atrophy of the nerve might become total. In all of the specimens a certain number of healthy nerve fibres were seen preserved in the atrophic parts. This showed how in alcoholism, that total blindness was rare, and how, on the other hand, in the field of vision of persons blind from retro-bulbar neuritis islets of useful sight were permanently preserved. Retro-bulbar optic neuritis presented an example of peripheric neuritis of great practical importance.

PERISCOPE.

Immunity to Tetanus and Diphtheria.

The two researches on immunity, of which our Berlin Correspondent telegraphed a brief summary last week, not only have a special interest at the present time, when the attention of the whole world is rivetted on the remarkable discovery of Koch for the cure of tuberculosis, but possess also great intrinsic merit. The paper on the Production of Immunity against Diphtheria and Tetanus in Animals, in the *Deutsche Medicinische Wochenschrift*, December 4, 1890, by Drs. Behring and Kitasato, is, perhaps, the more important of the two. These two observers have been engaged for some time in a study of the nature of diphtheria and tetanus, and they have at length succeeded in not only conferring immunity on animals against attacks of either disease, but also in arresting the disease after it has already set in.

The manner in which this is brought about is reserved for a later communication. In the present paper they deal with the subject only so far as to prove the correctness of the following proposition: "That the immunity which can be conferred on rabbits and mice against tetanus depends on the power possessed by the serum of the blood to render innocuous the poisonous products formed by the tetanus bacilli."

This explanation of the nature of immunity has not been distinctly given in any of the publications which have hitherto dealt with the subject. The views hitherto held regarding the nature of acquired immunity have been three—in the doctrine of phagocytosis, which seeks for an explanation in the activity of living cells; the bacteria-killing power of the blood; and lastly, acquired toleration. When any two of these

have failed to explain the phenomena of immunity, or have been proved by experiment to be false, this has been regarded as a proof by the process of exclusion that the remaining one was right. Thus Bouchard, in his recent address before the International Medical Congress, declared: "Let us speak no more of an education of leucocytes, and a toleration of cells to the action of bacterial poisons; it is the bacteria-killing power of the body which constitutes what we term vaccination, or acquired immunity."

One of the present observers (Behring), in the course of his investigations on rats and guinea-pigs rendered immune against diphthera, failed to find either of the above explanations satisfactory. The explanation was at last, after many failures, found in the bacteria-killing power possessed by the blood of animals immune to the diphtheria bacilli. This explanation was then found to apply also to tetanus. The results of their observations they sum up as follows:

1. The blood of rabbits rendered immune against tetanus possesses bacteria-killing properties towards the tetanus bacillus.

2. These properties belong also to extravascular blood, and to the serum obtainable from such blood.

3. These properties are of such a durable nature that they remain active even in the bodies of other animals, so that it is possible to obtain good therapeutic results by the operation of serum or blood transfusion.

4. These properties are entirely absent from the blood of such animals as are not immune against tetanus; and when the poison of tetanus is introduced into these animals, it can be found after death in the blood fluids of the body.

The following are some of the observations on which the above conclusions are based:—Their method of conferring immunity against tetanus they reserve for a coming paper. A rabbit was rendered completely immune against tetanus, the degree of immunity being such that 10 cubic centimeters of a virulent tetanus culture was entirely without effect, while ½ cubic centimeter sufficed to kill an ordinary rabbit. It was found that the animal had acquired immunity, not only against the living tetanus bacilli, but also against the poison. It could withstand, without ill effect, twenty times the dose required to kill a healthy rabbit. Blood was withdrawn from the carotid of this animal. Of this fluid blood 0.2 cubic centimeter and 0.5 cubic centimeter were injected into the peritoneal cavity of two mice. Twenty-four hours later both were inoculated with virulent culture of tetanus, two healthy mice being at the same time inoculated with the same culture. While the latter died in twenty-four and thirty-six hours respectively, the two former remained perfectly healthy.

The greater quantity of the blood was allowed to stand till the serum had separated. Of this serum, 0.2 cubic centimeter was injected into the peritoneal cavity of six mice. Inoculation of these twenty-four hours later with virulent tetanus proved without effect, the mice remaining quite healthy, while the mice used as control experiments all died in forty-eight hours.

It is also possible to obtain good therapeutic results with such serum, by first inoculating the animals and then injecting serum into their peritoneal cavities.

Further experiments were also made showing the intensely destructive action of this blood serum against the tetanus poison. A tetanus culture ten days old was taken and filtered, so as to be free from all spores. Its virulence was such that 0.00005 cubic centimeter sufficed to kill a mouse in four to six days, while 0.0001 cubic centimeter killed it with certainty in less than two days, 0.5 cubic centimeter of the serum of the immune rabbits was mixed with 0.1 cubic centimeter of this culture, and allowed to act for twenty-four hours on the tetanus poison contained in it. It was then found that mice could withstand 0.2 cubic centimeter to 0.033 cubic centimeter, or 300 times the dose necessary to kill healthy mice. The mice remained quite healthy, while the control mice died in six hours, after a dose of only 0.0001 cubic centimeter.

All the mice rendered immune in this way have remained so; they have been repeatedly inoculated with virulent tetanus cultures without the slightest ill effect. This fact is the more remarkable since in the many experiments that have had to be made not a single mouse or rabbit has ever been found naturally immune against tetanus, and furthermore all the attempts made in the laboratory for a long time back by other methods to render these same animals immune have completely failed. Thus the conclusion may be drawn that the explanation of the nature of immunity given above is one capable of wide application. In all cases control experiments were made with the blood and serum of rabbits not immune.

Both blood and serum proved to be entirely inactive. The same was found to apply to the serum of oxen, calves, horses and sheep.

It was also found that the blood of such animals while in the vessels was destitute of such tetanus-destroying properties. Thus rabbits injected subcutaneously with 0.5 cubic centimeter of a virulent tetanus culture, free from spores, died in five or six days with all the symptoms of tetanus well pronounced. In such cases on *post-mortem* examination a serous effusion was found in every case without exception in the pleural cavities. On the average 0.3 cubic centimeter of this fluid sufficed to give a mouse tetanus and to kill it, and the blood of such animals was capable of giving rise in turn to tetanus when injected into other animals.

The application of these most striking results to the cure or prevention of these two diseases in man is reserved for future consideration. The authors, however, aptly conclude their communication by drawing attention to the support given by their results to the view at all times widely held, and fitly described by Goethe in the words of Mephistopheles to Faust:

Das Blut ist ein ganz besonderer Saft.

These words derive a new and altogether special significance from the result of recent bacteriological observations.

The second paper is a continuation of one which appeared early in the present year by Brieger and Fraenkel, entitled "Researches on Bacterial Poisons." The main points of this paper were noted in the *British Medical Journal* at the time of its publication. The present contribution to the same subject is from Fraenkel alone, and deals with the methods of producing immunity against diphtheria. It will be remembered that in the paper referred to these two observers endeavored to show that the pathogenic action of a number of organisms was to be attributed to certain products of their activity of an albuminous nature; to these bodies they gave the name of "toxalbumins." The disease most thoroughly studied in this connection at that time was diphtheria. They considered the most characteristic features of these toxalbumins to be, first, their albuminous nature, and, secondly, their peculiar action on the organism. The latter, in many respects, resembled that of ferments, but they were unable to regard them as ferments, for this reason, that while, according to them, the action of ferments is more or less independent of the quantity present, in the case of toxalbumins the dose was the most important factor. The larger it was the more rapid and complete was their action, and they lost their power altogether when the dose fell below a certain limit. In this respect, therefore, they resembled in their action ordinary vegetable and mineral poisons.

Fraenkel's later observations, here communicated, deal with the artificial production of immunity against diphtheria.

There are two ways in which the body may be protected against the attacks of pathogenic micro-organisms. The first of these we owe to Pasteur. In it use is made of cultures, the virulence of which has been lessened in various artificial ways—by heating, etc. In the other method use is made of the various products of bacterial activity—completely free from the organisms themselves. Of the comparatively numerous researches that have already been carried out by various observers in this latter domain; those of Smith, Chamberland and Roux, Beumer and Peiper, Gamaleia, Bouchard, Charrin are here referred to; that of Hankin, who succeeded in isolating the very substance which confers immunity against anthrax, is, however, not mentioned—an omission all the more to be noted as his work is the most conclusive of all, and was carried on in the same laboratory as that in which Fraenkel worked.

Both the above methods have been used by Fraenkel in his present research. Little difficulty was experienced in weakening the bacilli of diphtheria either by heating their cultures to a certain high temperature, or by adding some antiseptic agent, such as potassium bichromate or gentian violet. The results obtained in this way were unsatisfactory and uncertain, the weakened cultures varying much in their activity, and very readily, under certain circumstances regaining their virulence. He found it impossible to confer immunity, even in a small degree, by this means.

In his experiments with the products of their activity, he used at first toxalbumins which had been kept in a dry condition for many months without losing in any way their poisonous properties. These failed entirely to confer immunity against the disease. It appeared, indeed, as if the animal inoculated with this substance in small doses died more quickly after subsequent inoculation than healthy animals.

Better results were obtained when, instead of the toxalbumins, he employed the fluids obtained by filtering the cultures through a porcelain filter, or heating them for an hour to a temperature of 55° C., thus freeing them from all living elements. Some of the animals injected with these cultures gained a certain tolerance of the diphtheritic poison, dying, for example, three, four, six and nine days after an injection of 0.1 cubic centimeter, instead of in thirty to thirty-six hours, as in the case of untreated animals. They all died, however, none of them acquiring a complete immunity. This result, such as it was, satisfied him that he was on the right track.

A further advance was made when, instead of small quantities, he used larger quantities of these culture fluids. The filtered culture, or the culture itself, was heated for an hour at a temperature of 100° C., and 10 cubic centimeters injected subcutaneously into guinea-pigs. A few of the animals so treated survived subsequent inoculation with virulent diphtheria; the great majority of them, however, died, although at later periods than usual, namely, after two weeks and a half.

He finally found that a temperature of 65° to 70° C., maintained for an hour, yielded the best results. Injections of 10 to 20 cubic centimeters of a culture of diphtheria bacilli so treated rendered guinea-pigs immune against subsequent injections of even the most virulent poison. Even this conclusion required modification, for it only applied when the subsequent inoculations were made not earlier than fourteen days after immunity had been conferred. If made sooner, the result was uncertain, some animals dying, others not. In the first few days after the injection the resistance of the animal seemed, indeed, to be lessened, the animals dying more rapidly and certainly than before, when inoculated with virulent cultures.

Furthermore, the immunity in this way conferred only applied against subsequent subcutaneous inoculation, and not to subsequent inoculation of mucous membranes—such as the vaginal—with diphtheria. To this extent, therefore, it is imperfect, and considering the ordinary method of propagation of diphtheria in man through the mucous membrane, this result obviously leaves a wide blank still to be filled up before we can apply these results obtained on animals to man.

The remaining portion of the paper is taken up with a consideration of the nature of the body which confers this immunity. Fraenkel concludes that it is quite distinct from the one that produces the poisonous symptoms, that while the latter is destroyed at a temperature of 55° to 60° C., the former is not destroyed till a temperature of 100° C. is reached, although it is weakened at any temperature above 90° C.

The best temperature, therefore, at which to heat the cultures so as to destroy their toxic properties without destroying those on which their power of conferring immunity depended is 66° to 70° C. This substance which confers immunity has no therapeutic properties. So far, indeed, from this being the case, its injection into animals previously suffering from diphtheria rather hastens their death.—*British Medical Journal*, December 13, 1890.

The White Blood Corpuscles in Croupous Pneumonia.

Dr. T. S. Kikadze, in the *Bolnitchnaya Gazeta Botkina*, May 16, 1890, reports investigations of the blood in a large number of cases of croupous pneumonia during the course of the disease. He describes minutely the methods and precautions used in the work.

The results are represented in diagrams which show distinctly the possibility of predicting the character that the disease will assume in its course, the prognosis, and in case of poor prognosis, the treatment which is proper to lessen the gravity of conditions. The conclusions are:

1. During a normal course of croupous pneumonia the absolute, as well as the relative, number of white blood-cells is mostly increased to twice or three times the normal number.

2. In fatal cases of croupous pneumonia no increase is observed, and sometimes there is actual diminution of the same.

3. The increase in the number of leucocytes is on account of the mature and degenerating elements of the white blood-cells.

4. The above-cited changes in the blood take place early in the disease, earlier than any pulmonary changes show themselves.

5. Once taken place, the above changes remain with little variation until the occurrence of crisis.

6. Just before the crisis takes place there is a sudden increase of the number of leucocytes; the latter is supposed to be due to the re-entrance of the leucocytes from the pulmonary alveoli into the blood-vessels. This view is supported by the fact that at the same time there is an increase in the number of degenerating leucocytes.

7. The increase in the number of the normal leucocytes and of those in process of degeneration is parallel with the body temperature.

8. During the period of fever in croupous pneumonia the blood elements show evidences of delayed morphological metamorphosis, which is seen from the elements being in a condition ready to disintegrate.

9. The red blood-cells are progressively decreased until the end of the disease.

10. The temperature and blood crisis occur synchronously. The number of the leucocytes and the body temperature fall suddenly to the normal or subnormal; the amount of the breaking-down elements is diminished accordingly.

11. During the day of crisis the blood shows evidences of hastened morphological metamorphosis in the sense above mentioned.

From the large number of pneumonic patients examined, the author found that the increase in the leucocytes is independent of the area of pulmonary involvement, the intensity of the inflammatory process in the lungs, or the period in the course of the disease. It has nothing to do with the pathological pulmonary process. It depends upon something that is not yet known, but which the author suggests is a pneumococcus, or some other pathogenic microbe, or the products of its vital changes, which fill the blood, secondary to which the local pulmonary manifestations show themselves.

With disappearance of the as yet unknown cause, the blood and temperature crisis takes place. In many cases the author predicted the approaching crisis of temperature because of the decrease in number of the leucocytes, before the temperature took place.

In view of the fact that an increase in the number of leucocytes in the beginning of croupous pneumonia is necessary to a good issue of the disease, the author suggests to use camphor early, when the increase is absent, because camphor increases the number of leucocytes twice and sometimes thrice the normal.

Leprosy in Norway.

In an interesting account of a visit to the Hospital for Lepers at Molde, Norway, published in the *Edinburgh Medical Journal*, November, 1890, Dr. W. Allan Jamieson describes its beautiful situation and its capacity, and discusses certain points in regard to the disease. Himself apparently a believer in the contagiousness of leprosy, he says that Dr. Kaurin, the Physician to the Hospital, is a full believer in the communicability of leprosy. He adds that there are, however, some curious points with respect to this. In Norway no nurse nor any medical man in attendance on lepers has, so far as is known, ever yet contracted the disease, nor have any experimental inoculations on animals been successful. Physicians have inoculated themselves, their colleagues and numerous healthy persons, introducing the leprous material in the form of portions of the nodules under the skin, but no one so treated has yet become a leper. To communicate the disease two factors would appear necessary—one, prolonged or very intimate contact with a leper, as by sleeping in the same bed, wearing the clothes of an affected person, etc.; the other, a peculiar condition of the system, probably induced by habitually partaking of a bad or at least unsuitable dietary. Mr. Jonathan Hutchinson, as is well known, holds strongly that fish is probably the vehicle by which the poison of leprosy gains access to the human body. Medical men have not yet generally adopted his view, but from several conversations which Dr. Jamieson held with intelligent Norwegian peasants as to their opinion of the cause of leprosy, it seemed evident to him that they were inclined to think that fish had at least something to do with its origin or spread. If such a view is, even to a limited extent, correct, there can be no true ground for any leprosy scare as far as England is concerned. There is no reason to fear that, under existing conditions, leprosy will again obtain a hold in Great Britain. Dr. Jamieson weakens his article a little by introducing an *ad captandum* argument founded upon the fact that a physician who holds strongly the view that leprosy is non-communicable once visited a Norwegian leper hospital, and there expressed his opinions freely and decidedly. "Will you then occupy a bed alongside of one of these patients?" asked the doctor in attendance. "No," replied

the anti-contagionist, thus put to the proof after a fashion he did not anticipate, "I have a wife and children at home depending on me." Dr. Jamieson says: He had not, and perhaps one could scarcely expect him to have, the courage of his opinion. This may be so, or not; but it has no bearing whatever upon the correctness or incorrectness of his opinion.

Risks of Cocaine Injections.

The *Medical Press*, November 5, 1890, says that two warning cases are reported from France. In one of them, which occurred at Lille, the patient died, and the dentist who gave the injection was acquitted of neglect, but condemned for practicing medicine without qualification. In the other, which occurred at Paris, the patient was with great difficulty brought round by hypodermic injections of ether. The cocaine injection was also made in this case by a dentist.

In another place the same journal says that the Lille dentist who was charged with causing the death of a girl by injecting cocaine in order to procure anæsthesia, has been sentenced to a fine of fifteen francs for breach of the law regulating the practice of medicine, the judgment endorsing the view that cocaine is an anæsthetic which requires to be used with prudence, and cannot legally be administered by other than a qualified medical man.

Exfoliation of the Bladder in the Female.

The *Glasgow Medical Journal*, October, 1890, quotes from the *Edinburgh Medical Journal*, June, 1890, that Haultain narrates a case of exfoliation of the bladder in a woman, due to retention produced by incarcerated retroverted gravid uterus. Microscopic examination showed the sac, which was expelled through the urethra, to consist of the bladder wall in its entire thickness. Haultain is of opinion that many cases which have been reported as exfoliation of the mucous membrane have really been of the entire thickness of the wall, as in his own case. By others the condition has been confused with exfoliation of a croupous false membrane. The cases published, occurring in females, have all been associated with one of two conditions—retention of urine or labor; the retention of urine being due in all cases but one to incarcerated retroposition of the gravid uterus. Experiments on dogs by May, of Giessen, have shown that retention of urine is of itself sufficient to cause death of the bladder. When the condition is the result of retention, Haultain considers that this is brought about by pressure of the retained column of urine on the veins of the neck of the bladder.

In those cases of labor where it occurs without retention, the pressure on the vesical neck will affect both arteries and veins, so as to produce complete arrest of the circulation. Of 33 cases of exfoliation of the wall in more or less entirety, to which reference is made, there were only 8 fatal.

The formation of an adventitious receptacle for the urine would seem to take place by the agglutination of adjoining pelvic viscera, and the organization of inflammatory products. The amount of control over the urine may be expected to vary with the extent to which the muscular coat, and more especially the sphincter fibres, have survived.

Protopine—A New Opium Alkaloid.

Protopine was first isolated from opium in 1870 by Hesse. It has a formula of $C_{20}H_{19}O_5$, and is present in but small amount. Since then its presence has been detected by Eykmann in the *Macleya cordata*, and by Selle in the *Chelidonium majus*, plants which also belong to the family of the Paveraceæ.

Dr. Engel has recently made some experiments on cold-blooded animals (frogs) and warm-blooded animals (guinea-pigs, cats and rabbits) to determine the physiological properties of protopine, and his results, which are summarized in the following statements, are published in the *Gazette Médicale de Paris*, October 11, 1890:

1. In small doses protopine exercises on the frog narcotic effects similar to those produced by other opium alkaloids.

2. In large doses it produces a paralyzing action on the muscular substance, and on the terminal ramifications of the peripheral nerves.

3. With small or moderate doses reflex action is not abolished, although this occurs when large doses are given.

4. Protopine produces toxic effects in mammals comparable to those produced by camphor, death being produced by a paralysis of the respiratory centre.—*Therapeutic Gazette*, November, 1890.

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The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

EDUCATION AND THE DISEASES OF SCHOOL-CHILDREN.

The object of education should be to fit the pupil for the hightest degree of usefulness possible *to him*. This implies that the pupil is an individual; that some knowledge may be useful to one and not to another; that different pupils are capable of assimilating varying amounts of the same form of knowledge. Childhood is the most critical time of education. Then thoroughness rather than extent of knowledge should be aimed at. Later on in life, when one has mastered a business or profession, it will be found that an acquaintance with a variety of subjects opens up many avenues through which one may receive pleasurable impressions, while at the same time it makes general social intercourse enjoyable, and enlarges the circle of friends. But in early life the rule should be *multum*, not *multa*, lest the child grow up with a smattering knowledge of many things and without knowing one thoroughly. Above all, it should never be forgotten, in the education of a child, that the most important consideration is health. A child is not educated for childhood, but with a view to ultimate usefulness when fully grown; and every one knows that, to the average person, a sound body is more important for success in life than a well-stored mind.

These remarks have been suggested by an article in the *Revue Médicale*, August, 1890, which refers to a question raised by Dr. Axel Key before the last International Medical Congress, at Berlin. Dr. Key asked if modern education either at home or at school is well adapted to its purpose and calculated to give children a sound mind in a sound body? In the course of his inquiry he made some interesting statements. Boys, he says, pass through three different periods of development: An important growth takes places when they are about seven or eight years old, another, but less considerable increase from their ninth to their thirteenth year; and at puberty—from fourteen to sixteen years of age—there is a remarkable and very rapid increase in height and weight. Girls pass through the same stages, but the stages appear some years earlier than in boys. As regards differences in social position, those in good circumstances are a year in advance of the poor of the same age, showing that poverty and faulty conditions of existence retard the development of children.

Key also says that children do not gain much in height from the end of November to the end of March; from March to July, height increases much, but not weight; while from July to the end of November, gain in height is very slight; but there is a great gain in weight—the daily gain in weight being often three times greater than during the winter months. When summer vacations

are early, they give opportunity for a very great gain of weight.

The observations of Key have a bearing upon the subject of the education of children; for they serve to give point to the trite remark about childhood being the time for physical growth and development.

The effect of ill-regulated conditions of education may be seen in Sweden, where, Key says, one-third of the secondary scholars are sick or afflicted with chronic affections. Myopia increases in frequency uninterruptedly from one class to the following, while thirteen and five-tenths per cent. of the boys have habitual headache, and nearly thirteen per cent. are chlorotic. Of the girls, nearly thirty-six per cent. are said to be chlorotic, while an almost equal number suffer from habitual headache ; ten per cent. at least, have curvature of the spine.

It is not fair to attribute all the defects found in school-children to the school and to study. Many of them would be operative out of school. The points, however, which we have sought most to emphasize are that childhood is the most critical educational period ; that children should be taught to "see straight and think clear," to adopt correct methods of study, to learn thoroughly rather than to learn many things ; and that in their studies they should be treated as individuals as far as possible, their special requirements and probable ultimate destinies being noted, and their mental and physical disabilities being taken into account. These desirable things are well nigh impossible in our public schools, for the classes are all large, rarely numbering fewer than fifty. The chances of a child are better in a small private school, especially along with careful home encouragement, and are probably best of all under a wise man as a private tutor.

SURGEON-GENERAL SUTHERLAND.

The nomination and confirmation of Colonel Charles Sutherland, to be Surgeon-General of the Army is such an excellent choice that we congratulate the President and the army upon it : the President because he has acted upon a principle which is admirable in every department of the public service, and the army because it will have a Surgeon-General who is an honorable man and a most excellent officer. More than this, the choice is one which will give support to the idea—so essential to good feeling in the army—that faithful and continuous service counts for something when questions of advancement arise.

Colonel Sutherland was Senior Surgeon of the Medical Corps, and has—as the *Philadelphia Ledger* says—earned his promotion by honorable and meritorious service on the field of battle, as well as in the hospital—in war as well as in peace. He is as reserved in matters of personal preferment as he is forward in all matters in the line of his professional and military duty ; and his promotion to the Surgeon-Generalship is due, we believe, entirely to his creditable and honorable record.

Dr. John S. Billings, whose name is so familiar to the medical world, was strongly urged for appointment, and would, we feel sure, have admirably filled the position, but we think the President did well to resist the pressure to appoint Dr. Billings, who will, no doubt, wait without repining until his turn fairly comes. Meanwhile the army and the medical profession will continue to have his valuable services, and he will not have to contend against the difficulties inseparable from a promotion over his seniors in service.

APPOINTMENT OF A LECTURER ON THERAPEUTICS AT THE JEFFERSON MEDICAL COLLEGE.

The Committee of the Trustees of the Jefferson Medical College, appointed to select an instructor to fill for the remainder of the college term the chair of Materia Medica, General Therapeutics and Hygiene, lately occupied by Professor Roberts Bartholow, on December 12 named Dr. Albert P. Brubaker for the position.

When the action of the Trustees in ap-

pointing the committee for this purpose became known, the students of the College who had favored Dr. Brubaker's selection started a petition to the faculty to that effect, and in a short time, it is stated, it had over five hundred names on it. On the petition coming before the Faculty, that body appointed a committee to confer with the committee of the Trustees, with the result noted above.

Dr. Brubaker is a graduate of the Jefferson College, of the class of 1874. In 1879 he was appointed Demonstrator of Experimental Physiology in Jefferson College. From 1885 to 1889 he was Demonstrator of Experimental Therapeutics. Since 1885 he has also been Professor of Physiology in the Pennsylvania College of Dental Surgery.

In making this appointment we believe the Trustees of the Jefferson College have found a happy solution of the difficulties into which they were precipitated by Dr. Bartholow's retirement. Time is afforded to see if Dr. Bartholow can resume his work, or to find a successor who will add to the reputation and success of the College; which meanwhile will have the services of an excellent lecturer on one of the most important branches of its curriculum.

Book Reviews.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the Reporter.]

THE SCIENCE AND ART OF OBSTETRICS. By Theophilus Parvin, M. D., LL. D., Professor of Obstetrics and Diseases of Women and Children, in Jefferson Medical College, Philadelphia. Second Edition, revised and enlarged. Illustrated with 239 wood-cuts, and a colored plate. 8vo, pp. 704. Philadelphia: Lea Bros. & Co., 1890. Price, Cloth, $4.25; Leather, $5.25.

The early appearance of the second edition of this work is evidence of the favor with which the first edition was received. Parvin's *Obstetrics* is universally conceded to be one of the best manuals extant. The author has drawn more largely upon French literature, and leans more strongly towards French practice than is the case with other English and American authorities. This feature of the book renders it a more real addition to American literature. The style throughout is admirably clear and pleasant, and remarkably free from dogmatism. The reader is thus left to form his own judgment when authorities differ.

Appearing at this time, when the subjects of extra-uterine pregnancy, placenta prævia, and the Cæsarean section are attracting such merited attention, it will be interesting to observe the position of so conservative a man with reference to these subjects.

While tubal pregnancy is considered by far the most frequent, all the varieties of ectopic pregnancy are admitted, or at least are not rejected, and ample citations from the literature of the subject are given. The work of Mr. Tait is fully appreciated—although his theories are by no means all accepted—but is not permitted to obscure the work of older and contemporaneous men. Ectopic pregnancy is estimated to occur once for every five hundred cases of pregnancy. This estimate is far higher than the usual one, but is amply supported by accumulating evidence. Salpingitis is regarded as the usual cause of ectopic pregnancy. The question of diagnosis is admirably presented. Broadly speaking, abdominal section and removal of the gestation cyst is recommended, whenever ectopic pregnancy is diagnosticated. After considering the question of electrical treatment, the author says: "No impartial reader of the reports of cases by competent and reputable men, can doubt that some cases of ectopic gestation have been conducted by this means to a favorable termination." But he concludes: "Goodell would restrict the application of electricity to those cases refusing abdominal section, or when no one can be found capable of doing the operation. I think this is the most that ought now to be said in favor of the treatment by electricity." This is certainly the view of impartial men.

During the second half of pregnancy prompt abdominal section is likewise advised. The only exception is when the fetus is dead, when sufficient delay to permit obliteration of the placental blood-vessels is advised. Whenever it is possible the fetal sac and placenta should be removed. Otherwise the placenta must be left. In this case the usual method may be employed, of leaving the umbilical cord to hang out of the abdominal wound, trusting to the drainage-tube to take care of the subsequent suppuration; or the cord may be ligated and removed close to the placenta, the sack thoroughly cleansed, and the wound closed without drainage, in the hope that the placenta may be absorbed; or this failing, a secondary operation may be done for its removal, should suppuration or septic changes occur.

A most elaborate review of the subject of placenta prævia is presented. The author evidently considers the tampon a most valuable device, and says but little concerning its dangers. But the methods of Barnes, and more especially of Hicks and of Murphy, which have revolutionized the subject, are fully given. It is interesting to find that the method of Hicks, employed in Germany in 190 cases, saved all but nine mothers. Murphy has had 38 cases, and only two maternal deaths. How pleasant a picture compared to the old mortality of 25 or 30 per cent.!

Our sensibilities are rudely shocked by the statement that the term Cæsarean section has no connection with Cæsar, but is derived from the operation—*caeso matris utero*. No evidence is given in support of this statement. Parvin accepts the limitations of Winckel for the performance of Cæsarean section, viz., when the conjugate is 2.6 inches in the generally contracted pelvis, or 2.1 inches in the flat pelvis. But he adds that embryotomy in pelves approaching these limits will prove, in the hands of those not expert, often more difficult than the Cæsarean section. Operation at a selected time, towards the close of pregnancy, is advised, rather than to await labor. In discussing the

relative indications of embryotomy and Cæsarean section the author is evidently in sympathy "with the increasing number who condemn its [embryotomy] performance where the child is alive." As indications for embryotomy, other things being equal, are given: 1. When the child's life is endangered, so that the probabilities of saving it by Cæsarean section are slight; 2. When delivery of the child without mutilation is impossible, and the mother refuses section; 3. If pregnancy is at term, and delivery is possible with premature labor, embryotomy may be selected in the hope of delivering a living child in a subsequent pregnancy by inducing premature labor. Cases in which the delivery of a living child is impossible, and yet in which embryotomy is safe, are difficult for decision. The woman must decide herself. Obstruction to labor due to cancer of the uterus or vagina suggests gastro-hysterotomy, rather than embryotomy. The mortality of embryotomy in proper cases given as 0 (Winckel); six per cent. (Auvard); of Cæsarean section, 8.4 per cent. (Winckel), 25 per cent. (Auvard).

Our space prevents a further examination of this book; but these chapters cover those subjects in obstetrics in which recent advances have been made; and most faithfully has the author presented the subjects. With reference to the Cæsarean section, we could wish that emphasis had been laid on the necessity for the examination of women during pregnancy, so as to be forewarned of existing conditions. Finally it would be well for women, not only that the book should find its way into every library, but also that its precepts should be mastered by every practitioner.

MEDICINAL-KALENDER FÜR DEN PREUSSISCHEN STATT AUF DAS JAHR, 1891. In two parts. Berlin: August Hirschwald, 1891.

This exceedingly useful publication comes promptly before the beginning of the new year, and contains in addition to the form of record for physicians' work which is used in Germany, a large amount of useful literature. It contains abstracts in regard to therapeutics, diagnosis, hygiene, autopsies, and a directory of physicians in the German Empire. For other than Germans it is a very valuable means of learning a great variety of facts in regard to medical matters in the German Empire.

Literary Notes.

—Mr. George Keil, 1715 Willington Street, Philadelphia, has in preparation the *Medical and Dental Register-Directory and Intelligencer*, for the States of Pennsylvania, New Jersey and Delaware, to be ready early in 1891, and desires every physician in this region to send him the following points: Name in full, school of graduation and year, street and number, post-office and State, office hours.

The *Medical and Dental Intelligencer* will contain in a condensed form information relative to the Associations, Colleges, Hospitals, special and general Dispensaries, Homes, etc.

Its list of National and State Medical and Dental Organizations, giving list of officers, time and place of meeting, and post-office address of physicians and dentists, their office hours (in cities) school of graduation and year, will be complete to date of issue.

The work will be mailed to each physician and dentist whose name appears in its pages.

Special Article.

KOCH'S REMEDY FOR TUBERCULOSIS.

A RESUMÉ OF ITS HISTORY.

[*Continued from Vol. lxiii, page 738.*]

The *Glasgow Medical Journal* for December contains a letter from Dr. W. Gordon, written from Berlin, November 18, and giving the views of Prof. Liebreich in regard to the Koch remedy. These may be summarized as follows: Prof. Liebreich thinks the fluid is certainly efficient as a test of the presence of tuberculosis and in the treatment of lupus—although he claims only improvement and "dare not" say cure. For phthisis he believes in "general improvement in some cases," but "no cure yet."

In a lecture before the Society of Physicians of the Charité Hospital in Berlin, Nov. 20, 1890 (*Berliner Klinische Wochenschrift*, Dec. 1, 1890), Köhler showed a number of patients in whom he had used the lymph for diagnostic and therapeutic purposes. In regard to the former, he claimed that persons with tuberculosis reveal the fact by a marked local reaction, while many cases of other surgical lesions present no such reaction. As to the former he showed a case of superficial lupus which he said was fully healed. He concluded with the statement that Koch's discovery is a "triumph of science."

In the *Berliner Klinische Wochenschrift*, December 8, Leyden gives a most interesting account of his experiences with the lymph from November 20 to November 27, covering 46 patients and 136 injections. His paper is a model of scientific fairness and discernment. He made an especially and very important point of the indications of the tuberculous character of serous pleurisy which were furnished by the effects of the lymph under his observation. As to the diagnostic value of the symptoms of reaction, he says that some patients who presented the reaction were absolutely free from suspicion of tuberculosis—as in cases of scarlatina and erysipelas. He concludes by saying his impression is that the "lymph" is an extraordinary medicament, but does not venture to claim that it is a trustworthy means of diagnosis. As to its curative properties he says he cannot express an opinion.

As to the changes in the bacilli, he says they cannot be regarded as a characteristic effect of the lymph because like changes are observed at times in untreated cases.

The first physician in America to administer the Koch lymph was Dr. J. P. C. Foster, of New Haven, Conn., who on December 3 used it on a patient with consumption.

On December 9 Dr. V. P. Gibney, of New York, used the lymph for Dr. Allan McLean Hamilton, at the N. Y. Hospital for Ruptured and Crippled.

On December 10 Dr. William H. Bennett, of Philadelphia, began using the lymph.

On December 10 Dr. Francis S. Kinnicut used it at St. Luke's Hospital, New York.

On December 12 Dr. Osler began using it at the Johns Hopkins Hospital.

On December 13 the University of Pennsylvania issued as a special number of the *University Medical Magazine*, a bulletin summarizing the facts so far published in regard to the Koch remedy and describing the method determined upon for its systematic study by a commission of the University.

On December 17 the lymph was first used at the University of Pennsylvania by Dr. J. William White and Dr. J. H. Musser, and at the Jefferson Medical College by Dr. F. P. Henry, Dr. William M. Angney and Dr. J. Solis-Cohen. The reports from the latter institution indicate nothing of special importance—reaction and hope on the part of the patient are recorded. At the University the effects of the lymph are being carefully and thoroughly investigated, and no reports are to be made public until enough observations have been made to warrant them.

[On December 29 Dr. Cohen informs the REPORTER that his patient at the Jefferson Medical College, a young man æt. 26, is an instance of advanced *tuberculosis pulmonum et laryngis*, with softening in the apex of the right lung and with nodular infiltrations upon the vocal bands and in the posterior wall of the larynx. He had been under treatment for two months, with large doses of creasote internally, and topical applications of first lactic acid, then menthol, and subsequently iodoform, under which he was progressing favorably; the night-sweats having ceased, nutrition having improved and the temperature having become practically normal. Tubercle bacilli, however, remained very abundant in the sputa. When the Koch treatment was instituted, the former treatment was suspended. The constitutional reaction was moderate under the first injection, and the larynx underwent marked congestion without any signs of œdema. After the second injection, the constitutional reaction was greater; and the inflammatory manifestations became more marked upon the vocal bands and in the posterior wall of the larynx.

After the third injection, the reaction was a little less than after the second, but this was soon followed by an absolute reduction of temperature below normal, and by a commencement of ulceration in the posterior laryngeal wall, so that it was decided to suspend the injections and watch the local manifestations. While the patient considers himself much better, Dr. Cohen does not consider his condition as good as it was when the injections were begun, and, unless on December 29, a marked improvement was found upon the condition noted on Saturday, the treatment with creasote and iodoform was to be resumed.]

In the *Berliner Klinische Wochenschrift*, December 10, 1890, there are instructive papers by Senator, Henoch, Litten, Turban and Ewald. Senator calls attention to the fact that he has now found the reaction did not correspond in the earliness of its onset, its amount or its continuance to the severity or extent of the tuberculous process. He says this reaction is exactly similar to what is known as febricula or ephemeral fever. He found evidences of depression of the force of the heart during its reaction. On account of the explanation of the *modus operandi* of the "lymph"—necrosis of the tuberculous tissue—he thinks the remedy especially valuable for tuberculosis of open passages like the pharynx and larynx, the intestines, and the urinary tract. He has seen it do good in a number of cases.

Ewald's paper is of very great interest as a thorough and systematic study of about one hundred cases in which the lymph was administered. The general conclusion may be stated as that it is useful for diagnostic purposes and as a remedy in the initial stages of tuberculosis of the lungs as well as in pleurisy.

The *Deutsche Medicinische Wochenschrift*, December 11, contains an address by Helferich, delivered before the Greifswald Medical Society on December 6, in which a full description is given of the effects produced by Koch's remedy in a number of cases of lupus and tuberculosis of the bones and

joints. It concludes with the statement that, in view of his experience, we may have "not the hope but the certainty that Koch's remedy in diagnostic and therapeutic relations marks an epoch-making advance."

In the same journal, Wolff, Director of Dr. Brehmer's Sanitarium at Görbersdorf, gives his experience of the reaction of phthisical patients after receiving injections of Koch's remedy. He found that advanced and grave cases furnished more marked reaction after minimal doses and that incipient and light cases sometimes reacted only after a repetition of the first dose. He describes some cases in which the patients were decidedly worse after receiving the injection; but he says the lymph did good service at Görbersdorf as an aid to diagnosis.

Arning, of Hamburg, in the same journal reports the use of Koch's remedy in two cases of leprosy: one showed no reaction whatever; the other, under the care of Dr. Engel-Reimers had a marked reaction; but this was general and not such at the points of leprous manifestation as is reported in regard to lupus.

Before the Medical Society of Hamburg, Schede, on December 2, reported good early results with the remedy in cases of lupus, tuberculosis of the joints. Maes, of Hamburg, reported good early results in lupus cases. Kast expressed a conservative opinion as to the therapeutic value of Koch's remedy; but spoke favorably of it as a means of diagnosis.

In the same journal in a report of a lecture by Paul Guttmann in which he described the manner of administering Koch's remedy and showed two young women as cured, who had had pronounced symptoms of tuberculous catarrh of the apex of the lung.

The *British Medical Journal*, December 13, contains a lecture delivered by Sir Joseph Lister at Kings College, December 3, in which he not only expressed great confidence in the diagnostic and therapeutic value of Koch's lymph, but also intimated that before many weeks the world might be startled by the disclosure by Koch of an "inorganic chemical substance as easily obtained as any article in the materia medica" which he saw cut short in animals the otherwise deadly course of "two of the most virulent infective diseases to which man is liable."

In the same journal in an address by Dr. Yeo describing his observations at Berlin; as to the curative value of the lymph he says: "Here, however, as well as elsewhere, it was scarcely possible, so short a time had the patients been under treatment, to observe that any actual curative changes had taken place. But it was exceedingly interesting and important to note the action of Koch's injections in cases in different stages of this disease."

As bearing on its diagnostic value he says he saw a case of chronic phthisis that had been in Davos for two years, and failed to react to doses of 3, 5, and 8 milligrams respectively; and there were one or two more case of undoubted chronic phthisis with bacilli in the sputum that had not reacted to the injections that had been made up to the time of his last visit. Another case in Professor Ewald's clinic, that yielded no marked reaction after injection of ordinary doses, was that of a highly neurotic young man, with tubercle bacilli in the expectoration, but no well-marked pulmonary physical signs. This was also the case with a gentleman who was in a private sanatorium in Berlin, and whom Dr. Yeo had seen in London in September, 1887. In this case there were evidences of a good deal of pleural thickening, and probably extensive fibroid changes in the left lung.

Nevertheless, he says: "Of one thing there can be no doubt; we have in this fluid of Koch's an agent which exerts a specific action on tuberculous processes. A minute quantity, such as from 1 to 10 milligrammes, which produces no effect on non-tuberculous persons, gives rise to the remarkable effects with which we are now familiar in persons affected with tuberculosis." . . .

Again he asks: "Have we here a cure for tuberculosis? and a cure for pulmonary consumption?" and adds: "I put the two questions separately because I do not consider them identical. . . . In advanced pulmonary consumption we have morbid changes to deal with other than those originally started by the tubercle bacillus, and even if we could destroy every bacillus in the lung as well as the products of their agency, we should in many instances still have to deal with a hopelessly damaged organ. And, even although Koch's treatment may be essential to the arrest of the disease in less advanced cases, hygienic and medicinal measures will be as needful as ever to guide the patient to a permanent cure. . . . I am disposed, from what I have already seen, to conclude that Koch has not been deceived in the observations on the

human subject which he has already made, and that his published conclusions will, in the main, be found just and accurate."

In the same journal, Dr. R. W. Philip, of Edinburgh, a special student of consumption, after a careful investigation of the subject in Berlin and in his own hospital practice says: "With regard to final results in these cases, especially in phthisis, it is premature to say much. In very advanced cases, of which I had the opportunity of studying about a dozen, I cannot say that I was satisfied of any definite improvement. The *post-mortem* results of the two or three fatal cases, so far as they have been communicated, point, however, to a local influence having been exerted on the affected organs.

"In less advanced cases, but still cases where, prior to the special treatment, physical examination revealed considerable areas of percussion dulness and abundant crepitations and when the patient suffered from loss of flesh, hemoptysis, night-sweats, and anorexia, the report must be more hopeful.

"In a considerable proportion of these I think we may safely admit that very definite amelioration can be effected. I observed a number of cases where night-sweats had disappeared, where the cough was practically gone, where there was a diminution or cessation of expectoration, and where the patient's subjective condition was better, and a few where there was a gain of several pounds in weight. In very few cases was I able to trace important improvement in the physical signs; but the time was too short for this, and no case has, so far as I was able to learn, been released from treatment as cured. Still I think, pending further observation, we are bound to fall back on the authority of Koch, who states categorically that within four to six weeks patients under treatment in the first stage of phthisis were all freed from every symptom of disease, and might be pronounced cured."

Likewise in the same journal there is a report of cases observed by Dr. William Hunter in Berlin, and treated by Mr. Watson Cheyne and by Dr. Heron in London. Reports of use of fluid at Manchester, Dublin, Glasgow are made and it is said that twenty-three cases were under treatment at Edinburgh, and that the fluid has been tested at the Brompton Hospital. It has also been used for the first time in Italy, by Prof. Bacelli, on November 29.

Notes and Comments.

Forty-five Days' Fast.

Succi, the Italian faster, who began a fast of 45 days in New York on November 5, ended his fast at 8.23 P. M., December 20, 1890. Other fasters have gone forty days without food, but they were so weak that they could not sit up. Dr. Tanner could not sit up after the tenth day, and could not write his name after the fifteenth day, but Succi has scorned the idea of weakening all through the weary weeks. On his fifteenth day he rode seven miles on horseback, and has exercised every day since. During his fast Succi drank freely of water, and took small quantities of a liquid which he calls an elixir and which is supposed to contain morphia.

At 6 P. M., December 20, he was examined and his weight was found to be 104¾ pounds; on November 5 it was 147¼ pounds—a loss of 42½ pounds, or less than a pound a day. His temperature was 98.2; pulse, 62; respiration, 19; general condition weak; tongue clear, moist and steady. The bulletin was signed by the thirteen physicians who have watched during the fast. The worst attack of gastric trouble that he had during his fast occurred on the last day, during which his pain was so acute that it was feared he would collapse; but his will power carried him through. From 5 P. M. until he took his first cup of cocoa, at 8.20, his pain continued to be more or less acute. It was evident in many ways—by the distortions of his face, which was horribly shrunken; by his frequent change of position on the lounge upon which he was reclining; by the nervous twitchings of his wasted hands; by the restless glare of his deep-sunken eyes, and in various other ways.

When the cocoa was prepared, shortly after 8 o'clock, Succi got off the lounge and staggered to the table where the nourishing diet was placed. The spectacle he presented was pitiable. He looked like a skeleton.

The next day Succi arose from sleep after a long slumber, which he fell into shortly after his feat was ended, and an elaborate meal was placed before him. He ate with extraordinary relish.

Following is the ménu: Anchovies, with butter; chicken soup, with rice; fried smelts, fried calves' brains, quail on toast, cocoa pudding, fruit, confections, ice-cream, coffee; one-half pint Rorals Extra; one-half

pint Grand Sec. He occupied two hours in consuming the food placed before him. He never faltered, but ate with zest.

Extirpation of the Bladder.

At the meeting of the Tenth International Medical Congress, at Berlin, in August last, Pawlik, of Prague, read a paper on extirpation of the bladder, which appears, in the form of an abstract, in the *Mercredi Médical*, November 5, 1890. It seems that the patient upon whom the operation was performed had persistent hematuria, which was ascertained, by catheterization of the ureters, to come from above the bladder. When the urethra was dilated, digital exploration and examination through the endoscope disclosed the presence of a polyp having a slender pedicle. The polyp was removed with the thermo-cautery through an opening from the vagina into the bladder, the fistula being subsequently closed. Complete recovery ensued. The woman left the hospital July 28, 1888.

One year later, in July, 1889, the patient returned. For eight months after the operation she had been in very good health, then hematuria reappeared and persisted. By endoscopic examination a papillomatous mass was discovered, attached over a large part of the surface of the bladder; the growth proved upon microscopic examination to be malignant. A radical operation was decided upon. The one adopted consisted in separating the ureters from the bladder and fastening them in the anterior vaginal wall, then excising the bladder and creating a new bladder by utilizing the remaining portions of the urethra and vagina.

The first operation was performed August 3, 1889. After the introduction of a metallic catheter into each ureter, the woman was placed in the knee-chest position; the vagina was then incised, in the direction of each ureter, for a distance of three-fourths of an inch, the ureter was dissected up and an incision of one-third of an inch was made in its posterior wall. Below this incision, the ureter was tied, and then separated at its vesical end from the bladder, the edges of the orifice of the ureter being then sutured to the opening into the vagina. Extirpation of the bladder was performed August 27, at a second operation. The belly was opened and, without injuring the peritoneum, the bladder, previously filled with an emulsion of iodoform so as to make it easily recognizable, was dissected to the internal orifice of the urethra. The bladder was then emptied and the sub-vesical space was tamponed with iodoform gauze, to prevent any hemorrhage. A transverse incision was now made immediately over the prominence made by the urethra in the anterior vaginal wall; this incision was made sufficiently large and the bladder was brought down through it into the vagina and excised at the internal urethral orifice. At this point in the operation, the patient went into collapse, but recovered on receiving a subcutaneous injection of nine and one-half fluid ounces of warm physiological salt solution. The anterior vaginal wall was sutured to the anterior border of the urethral wound, while the posterior border of this as well as a circular freshening of the entrance of the vagina were utilized to close up the vulvar outlet. Before trying the sutures, an elastic catheter was introduced into each ureter. The abdominal wound was closed down to its inferior angle, from which strands of iodoform gauze passed. The attempted closure of the vagina (colpocleisis) failed, and a fistula formed at the junction of the anterior vaginal wall with the anterior border of the urethral wound. Another attempt at colpocleisis, made June 20, 1890, also failed. On July 18, Pawlik performed sagittal colpocleisis, which succeeded, save for the persistance of a small fistula immediately behind the urethra. When in bed the patient retained her urine a long time; but when she rose, the urine dribbled from the fistula. She is fully aware when the new bladder, which has a capacity of about thirteen fluid ounces, is distended with urine; and she is able to evacuate it voluntarily, by the action of the perineal muscles. There is no doubt, Pawlik thinks, that if the fistula closes, the artificial bladder will possess sufficient retentive power. However that may be, it is a satisfactory result already, that the patient, who for a year was exposed to imminent death, can endure a great deal of fatigue.

Infant Feeding.

In an article in the *Northwestern Lancet*, November 1, 1890, Dr. A. H. Tufts says:

Regularity of time of feeding should be carefully observed. The infant stomach needs periods of rest just as much as the stomach of an adult. The habit of throw-

ing a bottle full of milk, accompanied by the deadly tube, into the crib or into the carriage for the infant to pull at while being trundled about in the hot sun, giving him the opportunity to gorge his stomach at any and all times, is enough to kill a robust man, to say nothing of a tender infant. Under one month of age, once in two hours is often enough to feed the healthy baby, the time to be gradually increased until at six months it is fed once in three or four hours from six A. M. until ten P. M. From ten P. M. to six or seven A. M. the child should sleep through, without feeding. We need to constantly warn and caution the over-anxious mother against overfeeding, or all our painstaking and care may be counterbalanced.

Too often the infant is given food when it needs and wants water instead. Dr. Tufts says he has often known of infants several weeks old who had not been given a spoonful of water, and whose parents seemed surprised when told the little one needed it as much as any one. Sometimes the mother says it will not take cold water; when it may be given warm. If babies were earlier taught the habit of taking freely of water he believes constipation would be less frequent among them.

Symptoms of overfeeding are restlessness, vomiting and undigested food in the feces. The latter used to be always called undigested curds or casein. Now comes one who says this is undigested fat, and proves his statement by saying this material is soluble in ether and alcohol, while casein is not. This, if true, must make quite a difference in our regulating the proportions of milk and cream.

[In this connection we quote from the *Medical Record*, November 15, 1890, thus: Dr. Macleod says mother's milk is always considered by the people of India as insufficient to sustain infant life, and various kinds of milk or other artificial kinds of food are suggested by wise friends to replace it. Cow's milk is generally used as infant food by all middle-class people of Bengal. Donkey's milk is largely consumed in rich families. The Mohammedans, whether rich or poor, prefer goat's milk to any other of its kind; while sheep's milk is considered to be the best article of food by the people of the Northwestern Provinces. Instances have been known where mothers with full breasts and an abundant supply of milk have kept their offspring entirely upon artificial food and thus invoked disease.—ED. REPORTER.]

Mayer's Ointment.

In a recent issue of the *Pharmaceutical Era* Professor J. U. Lloyd goes into the origin and history of Mayer's ointment, a favorite with eclectic practitioners. Probably John Quincy's "Common Plaster" was a forerunner to it, but it appears certain that some forty years ago a domestic ointment obtained considerable reputation among certain citizens of Cincinnati, and became known under the name "Mayer's Ointment." This ointment was supplied in small tin boxes, and was prepared by a Mrs. Mayer, who exercised great secrecy in the purchase of the ingredients, buying them severally from different druggists, a few from each, in order that no person should learn the entire composition of the salve. A formula for an ointment similar to this was given to Professor John King by Mr. Joseph P. Mayer, of Cincinnati, and it was introduced into his "Eclectic Dispensatory." The formula is as follows:—To olive oil, 2½ lbs., add white turpentine, ½ lb.; beeswax, unsalted butter, of each 4 oz.: melt them together and heat to nearly the boiling point. Then add gradually red lead 1 lb. and stir constantly until the mixture becomes black or brown; then remove from the fire, and when it has become somewhat cool, add to it a mixture of honey, 12 oz., and powdered camphor, ½ lb. Lard may be used instead of butter.—*Chemist and Druggist*, November 8, 1890.

Lanolin Milk.

Paschkis recommends lanolin milk as a most excellent cosmetic, especially for skins poor in fat. It is valuable also as a powder base, giving the skin an almost invisible covering of fatty material, which takes and holds cosmetic powders most admirably. It is prepared as follows (approximately):

Rub up 75 grains of lanolin with about a fluid ounce of water, warming gently. To this mixture add 4 grams neutral soap dissolved in an ounce of water; rub up again, and immediately add sufficient warm water to make about 12 fluid ounces and agitate thoroughly. If desirable, 15 grains of tincture of benzoin or borax dissolved in a little warm water may be added. The mixture must be strained, because, even when most carefully made, small lumps of uncombined lanolin will remain suspended in it.

Condensed Milk for Emulsions.

It is said that nothing equals condensed milk for making emulsions, and according to the *Formulary*, the expense is not relatively great. To make a pint of 50 per cent. emulsion of cod-liver oil, take of

Cod-liver oil	8 fl. ounces.
Condensed milk	3 fl. ounces.
Glycerin or syrup	3 fl. ounces.
Water	2 fl. ounces.

Add of a flavoring oil, such as bitter almond, 10 drops, or wintergreen, 15 drops.

Rub the condensed milk round in a dry mortar, and gradually add the cod-liver oil, working it in as is customary in making emulsions. When thoroughly incorporated add the glycerin, and lastly the water and flavoring extract.

Malaria in Birds.

Danilewsky has recently written to Dr. Dock, of Galveston, Texas, that he has seen acute malaria in birds, with rosette forms of the parasites, confirming his earlier view of the similarity [he says in parenthesis, "identity?"] of the organisms.

NEWS.

—Dr. Matthew Woods has removed to 1307 South Broad Street, Philadelphia.

—Dr. L. Webster Fox has just been appointed ophthalmic expert to the Board of Pension Examiners of the Philadelphia district.

—Dr. B. A. Randall has been elected Clinical Professor of Otology, at the University of Pennsylvania, succeeding Dr. George Strawbridge, resigned.

—The steamer San Juan, at San Francisco December 4 from Panama, reported that the cholera was making terrible ravages in Guatemala. More than 12,000 cases were reported in the State and 1,200 deaths had occurred in the city of Guatemala in seven weeks.

—The prize offered by the Medical Society of the County of New York for the year 1890 has been awarded to Dr. David Cerna, assistant in physiology, University of Pennsylvania, for his essay entitled, "A Physiological and Therapeutical Study of Hydrastis Canadensis."

—Dr. Albert P. Brubaker, of Philadelphia, was, on December 12, chosen by the Committee of the Trustees of the Jefferson Medical College to fill, for the remainder of the college term, the chair of Materia Medica, General Therapeutics and Hygiene, lately occupied by Professor Roberts Bartholow.

—Word is received from Nicaragua that a new disease has appeared there and has caused several deaths. The victims are seized with severe pains in the stomach. The pain is followed by dysentery and if prompt measures are not taken the sufferer dies within four hours. Dr. Espenosa, of that place, considers the disease a precursor of cholera.

—It is stated in the newspapers that a San Francisco physician has cured a number of cases of cancer, and that three pronounced cases from the New York Cancer Hospital are now on the way to San Francisco in charge of a prominent surgeon from New York, to be operated upon. The result will perhaps determine whether the treatment shall be introduced into the New York Hospital.

—The Senate, on December 30, confirmed the nomination of Dr. Charles Sutherland to be Surgeon-General of the Army. Dr. Sutherland is the ranking surgeon of the medical corps, and in making this promotion the President followed the rule of seniority. Dr. Sutherland is a native of Pennsylvania, and was appointed to the army from this State in 1852. He has a good record for service in the army and stands high in his profession and with officers of the line and staff of the army. He has four years to serve from May next before reaching the age for compulsory retirement.

—Dr. John Davis, one of the oldest physicians of Cincinnati, died suddenly on Christmas night at his home. He had been at Christmas dinner with his wife and a few friends, and while sitting in his library, was attacked with a violent fit of coughing. In half an hour he was dead. Dr. Davis was nearly 70 years old. He was an intimate friend of ex-President Hayes, and often entertained him and Mrs. Hayes, on their visits to Cincinnati. Dr. Davis was, at the time of his death, President of the Union Central Life Insurance Company, and also President of the Law and Order League of Cincinnati, in whose interest he was earnest and active.

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Clinical Lectures.

ACUTE PARENCHYMATOUS NEPHRITIS FOLLOWING WHOOPING-COUGH.—CHRONIC PARENCHYMATOUS NEPHRITIS MISTAKEN FOR CHLOROSIS.

BY W. C. HOLLOPETER, M. D.,

CLINICAL LECTURER ON DISEASES OF CHILDREN IN MEDICO-CHIRURGICAL COLLEGE, PHILADELPHIA.

Nephritis after Whooping-Cough.

Gentlemen: You will recall this case as the one I had before you a few weeks ago, when I was illustrating the sequelæ of whooping-cough. The child is but three years old. The mother held the belief, so common among many of the laity, that the doctor can be of but little use in relieving or curing whooping-cough. Hence the little boy has been permitted to encounter a stormy disease unaided, a storm so violent that nearly every organ in his body has become involved in consequence.

You will recall the fact that, when I first presented him to you a few weeks ago, he was very weak and miserable, besides showing a marked anemic condition, the result of his recent severe illness. He has a perforated membrana tympani, and, as the natural accompaniment, a purulent otorrhœa; also an oblique inguinal hernia of the worst possible character—the abdominal rings have been so far dilated that the omentum has followed the spermatic cord down into the scrotum, and by long-continued friction incident to the cough has formed inflammatory adhesions of so firm a character as to preclude, at least for the present, any hope of reduction. The chain of cervical lymphatics is also enormously enlarged, extending from the mastoid process down to and below the clavicle, and entering the mediastinum. This enlargement of the bronchial glands has induced a constant cough by pressure on the tubes, and the condition was for a time very suggestive of bronchopneumonia. The cough had ceased, however, and the child was apparently improving. Two weeks ago the cough reappearing, grew rapidly worse, and, in conjunction with it, the child commenced to vomit, but not very frequently at first. He was irritable, slightly feverish, and had lost his appetite. These symptoms continued for a few days; fever of not an unusual type was present for one day; the child was restless and very irritable, vomiting constantly for one whole day, and with his sleep much broken. At the expiration of the first forty-eight hours, the fever, vomiting and persistent cough diminished, the urine was now noticed to be lessened in quantity; and by the third day, when the fever and vomiting had entirely ceased, the urine was completely suppressed. The face was now ashy pale; the eyes were sunken and dull, and the lids appeared full and swollen. About this time it was noticed that the most dependent portions of the body commenced to show a dropsical accumulation. In this sluggish, stupid—I might say comatose—condition, the little fellow remained for two days, and during all that time he did not void one-half an ounce of urine. A blanket wrung out of hot water was used to envelop him, while hot poultices were placed over the back, and sinapism to the feet and legs. Milk and water was his only food. Small doses of calomel, frequently repeated, were exhibited, until he had a free action of the bowels. This acted as a derivative to his head, and as a vicarious means of unloading the renal pressure. One drachm of Rochelle salts was also exhibited in hot water for the same purpose. Slowly the kidneys resumed their function. At first the urine was scanty, very dark and coffee-colored, smoky from the blood it contained; but as the quantity in-

creased, the color became lighter; the dull, shapeless face assumed a more intelligent expression; and the sluggish condition of the boy became less marked. The outlines of the eyes and nose grew more natural; and with the gradual dawn of intelligent expression there was a subsidence of all the nervous symptoms; and thus our little patient had at last passed through the acute stage of parenchymatous nephritis.

Acute nephritis, called parenchymatous or desquamative nephritis, you will find is an almost constant sequela of scarlet fever. It also frequently follows measles, diphtheria, small-pox, and occasionally typhoid fever; but it is extremely rare to find it following whooping-cough. I have been unable to find any mention of in the text-books. In the light of modern investigation relative to the acute infectious diseases of children, it has been proven that in most, if not in all of them, systemic infection occurs through ptomaines, or the poisonous chemical agents which are produced by the action of microbes in the system, which are the original specific principle.

The symptoms of acute nephritis differ according to the causes that produce it. If it follows the specific diseases that I have mentioned, its onset is much obscured by the previous indisposition of the patient, as was illustrated in our present case. If it follows scarlet fever, the convalescence is of necessity greatly retarded. We scarcely know why the child has been so poorly, until perhaps we make some inquiry concerning its urine, when we notice that it is suppressed or scanty, or, perhaps notice the commencing dropsy. The child may cough—in fact, this child had scarcely got over the habit of coughing which so frequently follows pertussis, when the fever, the cough and the suppression of urine announced the kidney complication. You will recall the physiological relation that the skin and kidneys bear to each other. You can understand how we may have acute nephritis ushered in. When the child is perspiring at play, sits down to rest, and is subjected to a draft, or it takes a cold bath and a sudden suppression of the urinary secretion is the result, the whole burden of the excrementitious material is thrown on the kidneys; congestion and inflammatory action is sure to follow.

An analysis of this child's urine as it now is gives us the following result: Quantity passed during the twenty-four hours, ten fluid ounces; color, dark brown; odor, strong; albumin, 10 per cent. by volume; blood present in small quantity; a small quantity of mucus. Microscopical examination reveals epithelium, mucus, blood-fibrin and hyaline casts.

Nephritis Mistaken for Chlorosis.

Our second case illustrates a train of symptoms that we rarely meet with among children. This child, that I now bring before you, has been ill for two years. Her history is briefly as follows.

Minnie H., 15 years old; father and mother both living and in fair health. They have lost no children, and the family history is good. Minnie has not been sick since her third year, when she had measles. This disease, however, was not attended by any of the usual complications, such as acute nephritis, or ear trouble, or enlarged glands. She made a good recovery, so far as her parents could judge. Following measles, the girl has had a long period of perfect health, up to her thirteenth year. She was at this time full of spirits and life, enjoying play, and seeming as natural as is usual for a girl of her age. She had a fair color, although she was never of a rosy complexion. Her appetite was good, although she did not enjoy her food as a child of her age should. About two years ago she was noticed to grow less active; her disposition becoming more quiet and somewhat sluggish; her appetite, at the same time, grew indifferent; her desire for companionship grew less; in fact, she became irritable in temper and morose in habit. She avoided companionship. When her girl friends would call on her, their presence seemed to excite her, rather than to give her pleasure. She seemed to be better content to be alone than in their company. She is a day dreamer. She will now sit all day long gazing out of the window into vacancy; and if you ask her what she is looking at, she will scarcely be able to tell you. Her temper has also changed, she being easily annoyed. She will grow angry and excited if opposed, or cry, if scolded. Any unusual sight on the street, such as a drunken man, or fighting dogs, will greatly excite her and render her sleep troubled and broken. She has been in this stupid condition for nearly two years, it is slowly but surely becoming more marked.

During this interval she has been treated for malaria, bronchial catarrh, and finally for amenorrhœa.

I saw this girl for the first time one week

ago, when I elicited the history that you have just heard. I was inclined to make a diagnosis of chlorosis—a very common complication of puberty. There was a heavy, fetid odor about the girl's breath or person, that suggested a purulent discharge, either from the ear or throat. Careful examination revealed neither ear nor throat trouble. She was soft, white, anemic, yet not dropsical. She appeared to be stupid, as she sat in the chair and answered my questions in monosyllables. I could discover no dropsy. The heart was greatly accelerated on examination, as would be natural in anemia. I thought it might have been increased somewhat by my examination. The girl is well developed for her age; the mammary glands are fully enlarged and all the evidences of maturation have been reached. The mother tells me she has never seen her monthly expression. Thinking I had simply a case of chlorosis, or amenorrhœa, I prescribed a pill ferri carbonates and arsenic. The mother informed me at her first visit that she had repeatedly asked the doctor about the girl's water, saying it was scanty, and that she passed it with difficulty and that it was offensive. The day after her first visit, I was hastily summoned to her bedside, when I found the following condition. The girl was unable to lie down, but maintained a semi-recumbent position. The heart's action was intensely accelerated, running at the rate of 140 beats a minute. Dyspnœa was painfully great. She was unable to retain a recumbent position at all, and could find comfort only in leaning forward and supporting herself on a chair. She complained also of sharp pain in the region of the heart. On inquiry I found the urine entirely suppressed. I ordered a counter-irritation over the heart, and, as she had a temperature of 103° and thinking it was a case of pleurisy, I gave her three grains of acetanilid and one-fourth grain of calomel every hour. At the expiration of six hours I was again summoned. Her symptoms were not improved; indeed she was in a still more critical condition. The pulse was so rapid that it was scarcely perceptible; the dyspnœa was greatly increased; the position that she now assumed was almost a hanging one, forward; the stabbing, lancinating pains in the region of the heart were intensified; her cough was dry, short and constant. At this time I ordered a fly-blister over the region of the heart, and also made inquiry in regard to the urinary secretion. The mother informed me that it was still suppressed. Eight hours after the second visit I saw her again, and found the symptoms still exaggerated; her lips were blue; her face was blanched, approaching lividity; the muscles of the chest were laboring frantically; the radials were imperceptible; the pain was still intense; the cough was short and dry. She was in a state of collapse. A short time after this some relief was apparently manifested in the expectoration that she coughed out, as it was tinged with blood. This increased until the mucus expectorated was about one-half blood. The bloody expectoration, light and frothy, continued for fully eight or ten hours, when it gradually subsided, and with it all the distressing symptoms.

Without going further into details, we have here, gentlemen, a case of pericarditis, left pleurisy and acute bronchitis as a result of chronic parencymatous nephritis. Chronic parenchymatous nephritis rarely follows the acute form. It is also a disease of youth and is seldom found after thirty-five years of age. It is usually induced by some constitutional defect or depressing surroundings. These symptoms occurred in the order I have named, simply by extension, and gradually subsided. We obtained a urinary analysis at this time, and found that the girl was passing, on an average, about three or four ounces of urine per day. This continued for a few days, when, under active treatment, it gradually rose until twelve ounces had been reached. You will remember that from forty to fifty-five ounces is the usual average in health. A careful analysis shows the following results:

Physical Characteristics.—Quantity in 24 hours at this time twelve fluid ounces; color, pale; condition, sedimentary; reaction, neutral; specific gravity, 1.014; total solids, 10.87 grams.

Normal Ingredients—Sulphates, normal; chlorides, normal; indican, normal; earthy phosphates, diminished; urea, diminished; alkaline phosphate, diminished; uric acid, increased.

Abnormal Constituents.—Albumin, in amount about half the volume; no sugar.

Sediment.—Crystals of urates, few phosphates; granular and fatty casts.

The diagnosis in a child of this age between chronic parenchymatous nephritis and chlorosis or ordinary anemia presents a very difficult problem. Barthow says that "girls at the age of puberty are generally

subject to chlorosis. They may be with or without disorders of menstruation. The affected person experiences a change of her feelings, becomes morose or despondent and capricious, vibrates from the extreme of high spirits to corresponding depression; but low spirits is the habitual state of the largest number."

You will notice how closely this definition of chlorosis has been followed out in the patient before you. At the present time, however, all the chest symptoms have subsided, except a little bronchial catarrh and pleuritic friction sounds. She is still pale as you see her, and still somewhat swollen; her face is expressionless and shapeless. The heart is still beating at the rate of 120 or 130, and the urine still remains decidedly below the normal in quantity, and is loaded with albumin.

A hint is desirable here in regard to the treatment. After the counter-irritations and the poultices, and the sweating, to tide over the acute spell, infusion of digitalis and strychnia were exhibited. Digitalis is theoretically contra-indicated, as you know, by reason of undue pressure exerted on the renal structure. I withdrew it, and gave her Basham's mixture, combined with strychnia; but at the expiration of twenty-four hours I found this would not relieve her, as she complained of pain and numbness, and the urine seemed to be lessened in amount. She has therefore resumed her infusion of digitalis and strychnia; and, by careful attention to clothing and exercise, and by limiting her food to milk, we hope to improve her general condition.

WHOOPING-COUGH.—GREEN STOOLS OF CHILDHOOD.[1]

BY H. A. HARE, M. D.,

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Gentlemen: The first case I wish to show you to-day is one of whooping-cough. Whooping-cough is the third most important disease of childhood. According to statistics taken among the children of England, the greatest mortality is found to be due to scarlet fever, the second greatest to measles, and the third to whooping-cough, while in London pertussis is second in importance. But little is known of the etiology of this disease, further than that it is very probably due to some micro-organism which has not yet been isolated. A number of micro-organisms have been claimed to be the causative agent, but some who have investigated the matter pronounce them in no way different from bacteria found elsewhere. We know, however, that whooping-cough is a distinctly contagious disease. If whooping-cough breaks out in a neighborhood, all the children of that neighborhood will probably be affected. It runs a course of from six to eight weeks, and if the child is under two years of age the prognosis is unfavorable. We know, also, that the prognosis depends upon the severity of the attack and the strength of the child. The pathological appearances of the air passages macroscopically do not differ from those of ordinary bronchitis.

Upon listening over the chest, we hear râles, more especially at the base posteriorly, and after a whoop these râles are increased in intensity and are more diffused, showing that some mucus has been dislodged in the bronchial tubes by the effort of coughing. Some cases of whooping-cough whoop every five or ten minutes, or even oftener, and in some children there seems to be a constant convulsive condition of the whole respiratory tract. In other cases the whoop occurs but once in twenty-four or forty-eight hours. In treating these cases of whooping-cough it is often essential that the child be pampered to some extent, since anything which tends to cause it to cry will bring on a spell, and the child will become exhausted. When once you hear the cough of this disease you can never mistake it for anything else. There are two varieties of cough; in the first place there is the whoop which gives the name to the disease, and in the second place there is a dry, hacking cough which precedes the whoop. It is by the latter that we make our diagnosis in fifty per cent. of the cases we see, which are brought to us in the early stage of the disease. This primary cough, which comes on days before the whoop appears, is as characteristic as is the whoop. It occurs in from fifteen to twenty short respiratory movements, and in the advanced stage of the disease is followed by the characteristic whoop. We distinguish this primary cough from the cough of the first stage of bronchitis, by the fact that the latter is harsher and more rasping than is the

[1] Delivered at the University Hospital.

whooping-cough. This first period of the disease lasts for an indefinite time, but in time a slight increase in the inspiratory sound following the cough is heard, which gradually develops into the characteristic whoop which can be heard for a remarkably long distance.

Whooping-cough cannot be cured any more than can typhoid fever. Neither can we prevent children from taking it, except by isolating the cases which are affected. It is claimed, however, that small doses of quinine seem to exert a slight prophylactic action, protecting children who have been exposed to a certain extent. Quinine, it is known, has a distinct anti-bacterial or germicidal effect, and in the case of any adult who has never had the disease and who is exposed to this infection, a weak quinine spray to the fauces may be beneficial in averting an attack if the patient is willing to stand the bitter taste of the drug. This treatment has also been recommended highly for children, but it is practically impossible to use a spray upon a child. We must, therefore, either force the child's mouth open and paint the fauces, or we must rely upon the drug given by the mouth, together with some anodyne. I do not mean to say that whooping-cough is a disease affecting the fauces, but that treating the fauces in that way seems to alleviate the trouble greatly.

Pneumonia and exhaustion and capillary bronchitis are the two conditions which most frequently kill these children, especially if they are young children. Whooping-cough rarely, if ever, produces a fatal result directly from suffocation. If we do find a case in which the cough is exceedingly severe, we may use inhalations of the nitrite of amyl on the hand or upon a handkerchief. Two to three drops of the drug is sufficient. Another treatment highly recommended is the inhalation of chloroform. This is disagreeable to children, and if employed the proportion should be five parts of the chloroform to ninety-five of air. Ringer recommends pouring half a drachm of the chloroform upon the hand of the nurse and holding it under the child's nostrils. The child will soon learn to take a couple of whiffs, enough to postpone the paroxysm. There is no danger in this unless the child has a weak and dilated heart. The only disadvantage connected with its use is the placing of a dangerous drug in the hands of the people. Children often come to learn of the relief chloroform affords and run to their parents for it when the paroxysm is coming on.

In certain cases in the lower walks of life we cannot use these drugs because of the cost and the danger. We then resort to antipyrin, which I regard as the best remedy discovered in the treatment of whooping-cough as yet. Occasionally we must push it until we get the physiological effect, two grains every three hours to a child of 10 or 12 until we get the effect, and then every four or five hours. We must watch the effect of the drug carefully, stopping on the appearance of any bluing of the face or finger-nails. If I were giving antipyrin to a child of this age, and were to sit down near it, I should not notice the cyanosis probably, while were I to sit at a distance from the patient it would be quite distinct. This is a curious effect of the drug which I have frequently noticed. Usually the cyanosis first appears under the thumb-nail, as it does when using antifebrin, but the fingers are often blue from cold, and it is best to notice the face. For a child of this age (4 years) I should give one grain in water every two or three hours.

Often children with whooping-cough suffer with fever at night, which may be severe. In such cases we use antipyrin, stopping the use of the drug at once if profuse sweating is produced, as this further exhausts the patient. We know that any drug which produces sweating acts as a depressant upon the system. Antifebrin, phenacetin and the other coal-tar products probably also exert some favorable effect upon whooping-cough, antifebrin positively so. But they are all more dangerous than antipyrin, and must be given in smaller doses. Before the introduction of antipyrin, belladonna, small doses of opium, and other antispasmodics were used in this disease. Potassium bromide is of great service, especially at night, to produce sound sleep. It is well to use the bromide at night together with antipyrin during the day. Belladonna does good by decreasing reflex action. It was formerly supposed, and probably it is so, that the whoop was produced by some reflex irritation of the bronchial mucous membrane. It is due to a closure of the glottis followed by a very sudden inspiratory effort. It is, in fact, a long drawn-out hiccough, without a total closure of the glottis as in hiccough, but only a partial closure through which the air rushes with the production of the characteristic sound.

In some cases of whooping-cough ecchymoses occur, especially in the conjunctivæ, and at times hemorrhages occur, from the throat, nose, or hemorrhage occurs from the ear. On the other hand, some cases are attended by no bleeding at all. From a study of the physiological effect of aconite and veratrum viride I have thought that in these cases of hemorrhage we may by using these drugs produce a fall of the arterial pressure and thus prevent the occurrence of the bleeding. The asphyxia produced by the violent coughing gives rise to a rise of arterial pressure, and a rupture of the small blood-vessels follows with the production of ecchymoses. Now, by giving graduated doses of these drugs we may be able to prevent this terrible strain upon the heart and arterial system and thus prevent this complication.

The symptoms of an oncoming pneumonia are sometimes those of the catarrhal form, sometimes of the croupous. This comes on because the chest and lungs are weakened and congestions readily occur. If the pneumonia occurs in a week or two weeks after the commencement of the disease, it may be a croupous inflammation, but coming on late in the course of the disease it is generally catarrhal in nature, often bilateral, and affecting usually the lower lobes posteriorly.

The parents generally inquire as to how long the child will be sick with pertussis and you can safely say six weeks at least, or perhaps it may be eight weeks. German writers put the limit at sixty-two days, and during this period the child should be isolated as far as possible from other children. Occasionally in the course of the disease the child will swallow a large amount of mucus. A gastro-intestinal catarrh results and a lienteric diarrhæa follows, the child dying rapidly of exhaustion. With every cough the child will have a passage, and it will cough every five or ten minutes. Such cases are very discouraging.

Green Stools.

The next case I have to show you is one frequently met with in the treatment of children's diseases, and very readily cured if seen in the first stage, but if badly treated it will run on and may develop into cholera infantum. This baby came in with this history. It has always been breast-fed, and has always been well. A few days ago it was given some crackers or cake, and a few days later its stools changed from the normal infantile passages to small and large watery discharges containing curds of milk, and staining the diapers green. The passages were either passed green, or turned green within five minutes, a condition indicative of fermentation. This condition always arises from a torpidity of the liver. As a rule we get a history of obstinate constipation occurring for a few days before the attack. Practically, therefore, it is a case of biliousness. The child is constantly taking food; this is not digested, and passes out as curds, thus giving rise to a lienteric diarrhœa. Generally one grain of calomel divided into twelve powders, and one given every fifteen minutes until one-half a grain is taken will cure the condition. After giving this, warn the parents not to be alarmed if the child has an increase of its diarrhœa, with passages even worse looking than they were before. One or two hours after the calomel has operated give a very small quantity of bismuth, two or three grains every hour, till the patient has taken four or five doses. The calomel sweeps out the fermenting mass and stirs up the liver; the bismuth is slightly astringent and also antacid. If these cases are treated in the early stage in this way in ninety-nine out of a hundred we can get a cure in twenty-four hours. If not so treated they are apt to develop into severe cases of serous diarrhœa.

If any pain exists, as did in this child's case, we may have to use small doses of sulphate of magnesia, or a teaspoonful of sweet oil, which acts well on the bowels. A spice plaster is also of service in these cases. This consists in a heaping tablespoonful of powdered cinnamon, one of powdered allspice and one of powdered nutmeg; to these is added one teaspoonful of black pepper. These dry powders are stirred together upon a plate; a handkerchief is then spread upon a table, and upon this the spice is laid. Then another handkerchief is laid upon this, and the two are basted together without removing them from the table. Stitches are then taken diagonally across the two handkerchiefs, that is, they are quilted, which prevents the spice from falling to one place. Then while still upon the plate warm vinegar or brandy is trickled upon the upper cloth. The brandy may go through and wet the under handkerchief, but this is not advisable. This is then laid over the child's belly from the pubes to the ribs. The child may writhe a little at first,

but generally it will like the plaster, which is comfortable and warm. This can be left on from twenty-four to thirty-six hours. When removed it forms generally a perfect mold of the stomach, and is quite dry. The lumps may be broken up, again moistened and again applied. The pepper is a counter-irritant, the nutmeg and cinnamon are sedatives and the aromatic oils are absorbed to some degree and prevent griping. Should the child pass beyond our control while using calomel we should then administer astringents with care.

COMMUNICATIONS.

MALARIAL FEVER, WITH INTENSE LIVER INVOLVEMENT.

BY ENOS T. BLACKWELL, M. D.,
CEDARVILLE, N. J.

It is much to be wished that the terms applied to diseases or aberrations from health might more nearly express the pathological changes connected therewith. In many cases this is impossible, from the limitation of our knowledge respecting the origin and nature of the infliction. Many efforts have been made towards amendment in this particular, with only partial success. The malady to which I devote this paper has been named bilious fever, remittent fever, malarial fever, pernicious fever, etc. None of these terms appropriately expresses our notion of the fever, judged by its best known phases, much less if judged by its exceptional forms. We must be content, therefore, for the present, to accept, to some extent, the nomenclature in vogue. I do not purpose to speak of the origin of our autumnal fevers; for that is not yet positively established, and I have nothing to offer beyond the accepted theories. My design is to describe, as far as I am able, a very interesting and dangerous case that came under my consideration at a very critical period in its career.

Mrs. H., about fifty years old, is the wife of a dairy farmer, residing in a valley which formerly was much infected with malaria. She has an hepatic trouble of many years standing, and had complained for three months, especially, of pain in the right hypochondrium, which became so severe at times, and especially on lying down, that she was compelled to grasp the side with the hand, in order to limit the movement of the ribs, and so to diminish the suffering. She was unable to lie upon the side, and her bowels were greatly constipated. She is a woman of great vigor and activity in her household affairs, in prosecution of which, at the end of a most wearisome day's labor which involved severe lifting, she suddenly fell sick, and so remained for three or four weeks before I was called to assist in her treatment. I submit her own report of the salient points in her case, which is fuller than any I received; and has the marks of accuracy. It bears date November 27, 1889, and is the first fruits of her convalescence.

"I was taken with a chill, which lasted about two hours and was succeeded by a high fever; the temperature attaining 105° F. For three succeeding days I had chill and fever in alternate paroxysms, of about the same length, to the number of seven. During the chill I was extremely sick at the stomach. When the fever came on, I ached all over and could not rest. This weariness began as soon as I was taken sick; but, as I grew worse it increased. During the next four days I had no chill, but I constantly grew weaker. I had no appetite and slept but little. The pain and tenderness were great from the beginning; and increased as the days wore on. On the tenth day I had a chill and grew worse very fast. The headache and pain in both sides increased, and the sickness also. I was very thirsty, and swallowed a great deal of cracked ice, but no food. I was stimulated with alcohol, taking a teaspoonful of brandy once an hour, if I was able. Sometimes the intervals were longer. I never vomited very much at a time. The vomited matter was frothy and greenish; occasionally, there was in it a little blood. It was very bitter. The sick feeling that I had was terrible. I felt as if my stomach was throbbing, or turning over. I could lie only on my back; and no change could be made in my position, except as I was lifted. The weariness was very great—more than I can express. The burning in the stomach commenced after I had taken so much brandy. Then wine was tried. Whatever entered the stomach irritated it. Diarrhœa commenced about the sixteenth day, the stools being dark and resembling tar. It lasted a week, and then I became very costive."

On September 27, 1889, I first saw this

patient. She was profoundly weak, and could have her head raised only momentarily to facilitate swallowing. She lay altogether upon her back, and her voice was faint and weak. Her pulse was exceedingly small and feeble, and beating 90 times per minute. Her breath was mawkish and fetid. Her tongue was very foul, except just at the tip. She complained of nausea and extreme burning in the epigastrium. The alvine discharges were bronze-colored and very offensive. There was extreme tenderness beneath the free edge of the ribs. The liver boundaries could be traced very accurately in the right and left hypochondrium, and across the epigastrium, by the tenderness alone. The lower boundary of the painful area stopped abruptly with the verge of the liver, and did not at all involve the stomach. The disturbance of that viscus was purely functional and sympathetic. Through the attendants I learned that, when the disease broke out afresh in the second week, it was with extreme violence, the pain being exceedingly acute, and the vomiting severe and long continued. Collapse occurred during one of the paroxysms; and she lay as one dead. Partial recovery followed, and life continued with great weakness and extreme nausea and distress. The attending physician at first termed the disease "Malaria"—a cause for an effect. As the symptoms increased in gravity, it was named "Pernicious Fever." The consultant, who was called a few days before me, called it "Gastric Fever," a term which the attending physician interpreted as inflammation of the stomach, or gastritis.

The treatment in the early days of the disorder was sulphate of quinine in large and progressively enlarging doses; the extreme being eight grains every two hours; or ninety-six grains in a day. Mustard had been perseveringly applied across the suffering part, followed by a blister a few inches square to the right hypochondrium. To appease the intense stomach disturbance, chloroform and bismuth subnitrate had been administered. As an alterative—and, I suppose as generally useful—calomel was given; and as a diffusible stimulant, brandy, some drug being imposed on the unhappy stomach, every fifteen minutes. The stomach was the great object of attack, as this was believed to be the rock of offense. By the advice of the first consultant, the mercurial, which had been used perseveringly, and in great quantity, was omitted, and nitro-muriatic acid was substituted. The other medicaments were continued. The change was for the worse, rather than the better; the ejections becoming intensely sour, the epigastric heat aggravated and the nausea intensified.

It was now evident that the treatment was unsuited to the pathological condition, and must be changed to insure success. My advice was in line with my diagnosis. Because of the presence and precedence of the hepatitis, and the absence of tenderness over the stomach, I judged that the liver was mostly in fault; that the disease was emphatically a bilious fever, so called, and that the treatment should be directed especially towards this, the point first affected.

In deference to my age and experience, as well as to my relation to the patient, the attending physician, under protest, permitted the following treatment, all else being omitted.

℞ Potassii iodidi . . . . . ʒj
Potassii bicarb. . . . . ʒss
Aquæ . . . . . fʒiss

M. Sig. A teaspoonful, in water as hot as can be drank, every four hours.

℞ Acetanelid
Cinchonidiæ sulph. . . . . āā ʒss
Pulv. opii . . . . . gr. ij

Mix, and make fifteen pills, one to be taken every four hours, alternately with the preceding.

My *confrère* apprehended grave results from the action of the liquid mixture, and waived all responsibility for the consequences. This was at 9 o'clock A. M. There was little change in the symptoms during the forenoon; the burning in the stomach, the sourness and bitterness in the mouth, and the pain continuing much as before.

During the afternoon and evening there occurred three or four greenish-black stools. At bedtime, to relieve the pain and to procure sleep, one-quarter grain of acetate of morphia was given; the other prescriptions to be persevered with.

September 28, at 9 A. M., the patient's stomach was more comfortable; she had had two movements of the bowels during the night, of the same character as before, but had rested well. The pulse ranged from 90 to 100. The saliva was disagreeable and bitter; but she was able to take some prepared gelatine and beef-tea. Dr.—— saw

her alone. He was agreeably surprised at the success of the treatment, and ordered its continuance. On September 29, the patient rested well, without anodyne. She had some relish for food, taking for the first time some cerealine. Her pulse was 84, and was quite full and of good force. September 30, she had rested well. Her pulse was 80, and of good strength. There had been two more movements—not so dark, but apparently full of globules of bile. October 1, her pulse continued satisfactory ; and her voice had been gaining strength for two or three days. She could yet have her head only slightly raised while taking medicine or food, which were continued without change. The bowels were moving two or three times daily, with considerable pain.

At this time I ceased to see the patient ; but she gradually improved, and was able near the end of November to write me an account of her experiences. She did not become fully convalescent until late in winter, or the beginning of spring.

The mistake in attributing the intense epigastric distress in this case to inflammation of the stomach, and the attempt to relieve it by medicines acting directly upon its mucous membrane, vitiated much of the early treatment, many of the drugs increasing the irritation and retarding recovery. This mischase clearly arose from the failure to recognize and appreciate the tissue or organ positively at fault. This could be easily accomplished with care, as the differential boundaries of the liver and stomach could be accurately mapped out by using the proper physical tests. The impropriety of such "whips" as brandy and chloroform, and their injurious influence, was amply shown by the subsidence of the stomach irritation, and the regulation and strengthening of the pulse which followed their withdrawal. The change for the better succeeded immediately the change of treatment, and is attributable to the subsidence of the hyperemia of the portal vessels, through the influence of the iodide of potassium, the potations of hot water, and the withdrawal of irritants and stimulants.

Castor oil has been found adulterated with resin. If shaken with nitric acid the adulterated oil becomes deep brown, and the acid layer assumes a yellow color. With pure castor oil the acid remains unchanged, while the oil assumes a light brown color.

WAS IT RELAPSING FEVER?[1]

BY A. D. BARR, M. D.,
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The following is the description of a continued form of fever that came under my observation in the latter part of 1888. At first I thought it to be malaria, and treated it accordingly ; but I soon found that antiperiodics had no influence over the disease. I then abandoned all treatment, except to modify the symptoms when they were dangerous. When the fever exceeded 103° F., an antipyretic was given ; and this was always acetanilid or quinine. When the nausea and vomiting were prominent some form of opium was used. During the first intervals nux vomica, arsenic and quinine were administered to prevent a return of the paroxysms, but without success. The natural course of the disease was carefully studied, uninfluenced by treatment, and the symptoms noted at the time furnish the data of this article. It was a self-limited, continued form of fever, the distinctive feature of which was three or more relapses. The recurrence of fever, as before stated, was the distinctive feature. Abruptness of invasion was characteristic of the disease. There was no prodromal or incubative stage. The seizures were never ushered in by a distinct chill ; though chilly sensations were complained of, followed by a rise of temperature, usually sufficient to cause the patient to take to bed at once, though it sometimes required one, two, or even three days for the temperature to become sufficiently elevated to produce such a result. Perspiration seldom occurred until the fever began to decline. The fever attained quickly to considerable intensity, often reaching 103° or 104° F., within twenty-four hours. In one case the fever reached 104½° F. on the evening of the first day. This was, however, a relapse, instead of the primary attack. During the paroxysms the temperature denoted a persistent intensity of fever, ranging from 100° to 105° F. There were no oscillations ; the temperature either gradually or rapidly reached its maximum, and then it maintained about the same elevation for from one to fours days and sometimes longer, and usually subsided gradually. The duration of the

[1] Read at the sixteenth Annual Meeting of the Mississippi Valley Medical Association, October, 1890.

primary attack varied from six to twelve days.

During the intermission, the absence of fever and all other symptoms was complete. The period of intermission varied from two to twelve days, the average being about seven. The relapse, like the primary attack, was sudden, and was also generally ushered in by chilly sensations, though the first symptom was sometimes an elevation of temperature. The fever in the relapses suddenly became more or less elevated, usually more elevated than in the primary stage. The relapses also generally subsided gradually, and with moderate perspiration. Their duration was from four to ten days, and the greatest number was five.

Of symptoms referable to the digestive system, nausea and vomiting occurred often enough to be somewhat characteristic. They were generally prominent features, but they were not always present. They were frequently so severe that the patient was in danger of sinking from exhaustion or collapse. The vomited matter generally contained bile, and not infrequently blood. The tongue was generally coated with a white fur, but sometimes became dry and cracked. Diarrhœa was very infrequent. Constipation was the rule. Tenderness over the epigastric and iliac regions occurred to a very moderate degree. The appetite was often impaired, but not to the extent that is usual in most diseases where the temperature is elevated to as high a degree as it was in this case. Sometimes there was a noticeable craving for food, so much so that it was highly distinctive. During the paroxysms, pain in the muscles of the small of the back and the calves of the legs were complained of. They were never entirely wanting, though they varied in intensity.

The perceptions were not blunted in this as in various other diseases. Delirium was present sometimes; but it was of that character which is likely to occur when there is a high febrile movement, without regard to the existing malady. The face was usually flushed. The amount of urine was usually decreased. The decrease in one instance amounted to complete suppression for twenty-four hours; and the kidneys acted badly for several days thereafter; which in turn was followed by an excessive diuresis. A copious flow was apt to occur about the cessation of each seizure.

Regarding the cause of the disease, I am unable to give any satisfactory statement. In one case it seemed probable that it was contracted by contagion, as the child was in frequent contact with a young woman suffering with the same disease. The disease seemed at times to be developed spontaneously.

In regard to treatment, all that I could do was to modify the symptoms. The disease was essentially a self-limited one, and was uninfluenced by all treatment instituted by me. Quinine, given in five or ten grain doses, from two to six hours apart, seemed to aggravate the condition by increasing the nausea and vomiting. Calomel also seemed to retard convalescence. The nausea and vomiting were best controlled by morphine and Listerine. In the first stage the pains were often so severe as to call for an anodyne; but as a rule when the temperature was reduced below 100° F., they subsided until the fever again became intense enough to call for a repetition of the antipyretic. Good, plain, wholesome food was allowed.

Society Reports.

SUPRA-PUBIC CYSTOTOMY.

DISCUSSION AT THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION, NOVEMBER 12, 1890.

In discussing the paper of Dr. Cobb (see p. 7).

Dr. G. Frank Lydston, of Chicago, said we must necessarily consider the question which, as I infer from the title of his paper, Dr. McGuire would have discussed if he were here, the best route to the male bladder in cases of calculus, and more particularly of prostatic disease.

The revival of the old supra-pubic operation, which had so long fallen into disuse, has, under antiseptic methods, resulted, in my opinion, in a little too much enthusiasm regarding its merits. I think we must be guided by the same wise conservatism that has been suggested here this morning relative to the question of removal of the diseased appendages in the female. I believe that a proper selection of cases is necessary. I do not believe that every case of prostatic disease, of calculus or of enlarged prostate, justifies the performance of the supra-pubic operation to the exclusion of everything else.

There seems to be a tendency in the direction of routinism in this respect. When a calculus is present in connection with an enlarged prostate, and the prostate is very large, particularly if it be suspected that there is hypertrophy, especially some form of hypertrophy in which a distinct tumor is present, or in cases in which the bladder is profoundly involved, it is undoubtedly best to perform the supra-pubic operation. In this way we avoid certain dangers which in severe inflammatory conditions of the bladder are incurred by the performance of the perineal section. One of these is the extreme danger when the bladder is in a condition of chronic inflammation and the urine is strongly septic, and of septic absorption from the perineal wound. There is no question but that the perineal wound is dangerous in this respect, and far more so than a wound inflicted by the supra-pubic operation. The facilities for absorption are greater, and the tract over which the urine is allowed to flow is more important. It is desirable to avoid this absorption, and in cases of extreme bladder disease in which the urine is highly septic the supra-pubic operation is the best.

Another consideration—and it is one of the principal dangers we have to contend with in operations upon the male urinary apparatus—is shock. It is not only injurious *per se*, but indirectly, by reflexly suppressing the function of the kidneys. The shock in supra-pubic section is much less than in the perineal operation. Where this consideration is of importance, it is undoubtedly better to perform the supra-pubic section. If there is a large stone, or if there is any portion of the prostate that is susceptible to surgical measures, the opening of the bladder from above of course facilitates matters. It is a difficult thing to accomplish removal of a portion of the prostate through a perineal wound. Some surgeons have reported extraordinary cases which have been operated on by electrolysis and by the galvano-cautery. I would rather see the operations than read of them. I would have to see them performed in order to be convinced of their utility. Briefly, then, in cases in which the urine is highly septic, in the cases in which the kidneys are disturbed, in cases in which it is desirable to avoid shock, and in cases where operation on the prostate is contemplated—*i. e.*, where the removal of any portion of the prostate is deemed advisable, the supra-pubic operation is undoubtedly the best. When a calculus is small, provided that we decide upon a cutting operation rather than upon litholopaxy with the bladder in good condition, and when the prostate is not extremely large, if any operation be done in the way of exploration of the bladder, the perineal operation should be preferred. Danger is avoided by the procedure of Reginald Harrison, which consists of the introduction of a rubber tube into the bladder, thus avoiding contact of the septic urine with the tissues; this is a modification of Cock's operation.

When symptoms of serious systemic poisoning exist, the supra-pubic operation should be selected. I mean by this, not symptoms of uræmia so-called, but that peculiar toxæmic state incidental to the absorption of ptomaines, which characterizes many chronic diseases of the urinary organs. This systematic poisoning is noticed in a minor degree even in some cases of relatively slight strictures. I do not think that the supra-pubic operation is any better from the standpoint of drainage than the perineal operation, but where drainage is to be prolonged it is much more convenient in this situation. Again, absorption, as I have already remarked, during the removal of the septic material by washing of the bladder and during the spontaneous draining away of the urine, is not nearly so apt to occur as when the operation is done in the perineum.

In perineal operations, after the danger of shock has passed away, there is danger of septic infection in direct proportion to the frequency with which the urine is allowed to come in contact with the wound. The same is true of internal cutting operations in stricture. It will be found in many cases that the patient will be pretty comfortable until the first time he urinates, when immediately a chill followed by fever is set up, and very often goes on to a fatal issue, with all of the symptoms of profound septic poisoning. The tract of the wound in the supra-pubic operation is not so long, relatively speaking; it does not traverse such important structures, nor are these parts so well endowed with sensitive nerves and absorbents as is the case with perineal wounds.

Dr. John D. S. Davis, of Birmingham, Ala., said: I cannot accept the statement that the perineal incision is the best for draining the bladder when we have no enlarged prostate. I have done Reginald Harrison's operation a number of times. I have observed

the results of the perineal incision many times, and in no case have I got as good results as by supra-pubic operation for draining the bladder *per se*, from the simple fact that the tendency of the perineal incision is to close before the pathological conditions in the bladder subside, while with the high operation it does not close so readily. I do not think the high operation is the ideal one for the relief of stone. I think the bilateral incision (perineal) is the best, that is, in cases where you have no enlarged prostate. It is best for the removal of the stone where you want no after drainage. Where you want after drainage, my experience as well as that of Dr. McGuire and other surgeons, proves conclusively, and beyond any possible doubt, that the high operation is the best.

I have a criticism to offer regarding the technique of the operation. I do not agree with Dr. McGuire in regard to making his coffee spout fistula. He discarded it over a year ago, and now follows my technique. I have three methods for making the fistula:

1. When the distension is great and no intra-vesical operation is necessary, the opening is made with a trocar, withdrawing the stylet and replacing it with a rubber catheter, after the introduction of which the canula is withdrawn, leaving the catheter in the bladder. It is necessary sometimes to enlarge the external or cutaneous opening to prevent a closure of the catheter by compression, and to render the external opening sufficiently large.

2. The bladder may be opened, when distended, by a direct incision with the knife, in the median line, with cutting edge towards the symphysis pubis at an angle of forty-five degrees. The knife is withdrawn and a catheter is introduced through the wound into the bladder.

3. A perpendicular incision, one or two inches, is made in the median line above the symphysis pubis. If the pyramidalis muscles are in the way the fibre should be cut. The transversalis fascia is divided on a grooved director from symphysis to upper margin of superficial wound. Instead of following Guyon's manœuvre I catch the bladder with a tenaculum on a line with the symphysis, through the pre-vesical fat, and cut with a bladder knife into the bladder with one smooth, clean incision, to prevent undue disturbance of the cellulo-adipose tissue between the bladder and pubes, and avoid infiltration. I have never seen a case where it was necessary to push up the pre-vesical fat, and with it the peritoneal cul-de-sac. If the bladder is caught on a line with the symphysis and cut downward, no fears need be had for the peritoneum. Cutting this pre-vesical fat prevents its after dropping down over the opening into the bladder, and acting as a valve to prevent easy access to bladder, escape of urine, and causing infiltration.

I agree with Dr. Lydston that the shock is much greater in the perineal operation, but this operation is the ideal one in my judgment for the removal of stone, where no after drainage is required; but where we desire after drainage the high operation is the better.

The fistula is made competent by a pseudo-sphincter formed by the fibres of the detrusor urinæ muscle. In all my cases there is the power to retain and expel the urine at will regardless of the position of the body.

Dr. Joseph Price, of Philadelphia, said: Some of the gentlemen differ in method from the distinguished gentleman that devised this operation, and surely they deserve credit for perfecting it. Dr. McGuire, I believe, has rejected all perineal operations for the removal of stone, and he looks upon this as the most perfect of all methods of dealing with vesical troubles, whether disease or calculus. He has now so completely perfected the operation that he tells me he has a number of men traveling about passing their urine at intervals of every four or six hours at ease, having perfect control of both the bladder and its contents, passing the urine in a stream and suffering no inconvenience from the new channel for voiding their urine. He expresses his regrets that he has done so many perineal sections for stone.

What Dr. Davis has said in regard to drainage I concur in. You can drain anything above the pubes and drain it successfully. It is curious to note the results of the two schools, one advocating vaginal drainage, and the other supra-pubic, the first following the methods of Martin and others of puncturing the vaginal wall and draining from the vagina, and the second that of drainage from above. The results are that Martin lost by vaginal drainage fourteen in 77 cases of pelvic operations, a mortality that should stay our hands in such work.

Dr. W. E. B. Davis, of Birmingham, Alabama, said: I would not detract any of the honor of this operation from Dr. McGuire.

Dr. McGuire is a great surgeon and has done good work in this direction. I believe with him that this is the ideal operation for stone or for cystitis. The reports of the histories of Dr. McGuire's cases are not satisfactory. We can get but little idea of the after treatment. My brother (Dr. John D. S. Davis) has operated on more cases than any other man in the South except Dr. McGuire, and we have had an opportunity of following these cases, and have found that it is a good deal of trouble to keep the fistula open. Every two or three weeks patients will come to you complaining of some trouble in the fistula. I have seen abscesses form in some cases. Dr. McGuire, you remember, when he first devised the operation, suggested sewing up the lower part of the wound, making a coffee-spout fistula, allowing the urine to come out at the top of the wound. My brother followed Dr. McGuire in the case of a man with cystitis. He tried to keep the fistula open; but an abscess formed at the lower angle of the wound. I insisted upon removing the tube from where it was and placing it in the bladder through the opening made by the abscess, but he said he was going to follow Dr. McGuire's technique. However, the urine did come through the abscess opening and proved the best operation to be *direct supra-pubic cystotomy*. My brother was the first, I think, to read a paper on this subject.

Dr. McGuire deserves a great deal of credit for the operation, but for the technique of the operation, the credit should be given where it belongs. We have done the direct incision a number of times. It is the ideal operation. We do not want to make a long canal. It is not a lengthy canal that controls the urine. There is no question but what patients will pass their urine voluntarily through the direct fistula just as they do through the natural passage.

The trouble is that these cases, where we resort to supra-pubic cystotomy for drainage in prostatic troubles, come to us too late. This is well illustrated in the case of an ex-vice-president of this Association, Dr. R. D. Webb, a man who has written most valuable papers on this subject, advising early operation. Dr. Webb, however, neglected his own case until he was almost dead. He had been unable to pass urine except through a catheter for a great many years, and for the past six months he had been compelled to draw it off frequently. He was having severe paroxysms of pain constantly. While he has been greatly relieved by the operation, which I performed more than two months ago, I doubt whether he will be able to go about his work again. He waited too long. The prostate was enormously enlarged, and when we came to do the operation we had great difficulty in finding the bladder, which would hold only two or three ounces of urine. We would insist on early operation in prostatic cases.

Dr. Geo. A. Baxter, of Chattanooga, Tenn., stated that one of his recent cases was such an apt illustration of some of the points made in reference to supra-pubic drainage and the danger from septic infection by drainage though the perineum that he felt compelled to make a report of it.

The subject, a former doctor of medicine, between 70 and 80 years of age, suffered severely from enlarged prostate, and was in the habit of relieving himself of occasional attacks of retention by using the catheter himself. During a visit to some mountain springs, thirty miles distant from Chattanooga, he suffered one of these attacks of retention, but failed to enter the bladder. A neighboring physician was called in and failed also, and he was sent post haste to me. He reached town in the night, and called temporarily a very competent physician, who found him over a vessel with a long silver catheter pushed up to the hilt, but not in the bladder, and examination disclosed the fact that this had been done frequently, so that it was impossible to tell where the real canal was, so ruptured and torn was the whole urethra. I saw him early the next morning, and with the doctor last in attendance determined upon aspiration rather than further trial to enter the bladder by the natural passages, or by perineal operation, after first confirming the condition as reported to me, for the following reasons:

1. The bladder was immediately distended and had been so for forty-eight hours, hard as a rock and seemingly likely to burst at any moment, rendering immediate relief imperative.

2. I thought and still hold that a route through the perineum or the urethra simply would have necessarily produced infiltration, sepsis and death.

The man was unconscious by this time with stertorous breathing, weak, fast pulse. I aspirated, but had to turn the needle a little to the left side before the bladder was entered. I followed the immediate supra-pubic cystotomy for the purpose of complete drain-

age in order to protect the parts lacerated by himself, put in a large double tube and washed the bladder out with boric acid. That I was right was evidenced by his condition, and he died either as the result of uremia, from which he was suffering when I operated, and from which he was only partially relieved, or from exhaustion of his long continued suffering and generally prostrated condition, I do not know which, but it matters little, as the case is here related for the illustration of points in other directions made by the gentlemen discussing this subject.

Dr. F. W. McRae, of Atlanta, Ga., said: With regard to the termination of some of these cases, I desire to exemplify the statement which Dr. W. E. B. Davis has made. The operation is frequently delayed too long to be of benefit to the patient.

I operated on a man, aged 72 years, last summer, who had been suffering for five or six years from supposed prostatic disease. He had been under my care but a short time, when an attack of cystitis occurred. I examined him for stone and was unable to find it. I finally decided to do the suprapubic operation with drainage, and after cutting down and opening the bladder I found a stone embedded underneath the prostate, which I removed. This patient—I will say by way of parenthesis—had in the last five years two strokes of hemiplegia. He had been paralyzed on one side twice and was not in the best physical condition for the operation. I did the operation as suggested by Dr. Davis. The case progressed nicely until the fifth day, when the patient suddenly died. I didn't have a chance to make an autopsy; but the presumption was that he died from some cerebral trouble. The wound was opened, which I found had perfectly healed, except opening left for drainage-tube, and there was no apparent suppression of urine.

Dr. W. H. H. Cobb, of Goldsboro, N. C., said: Some of the interesting points in my paper have not been touched upon in the discussion. First, the patient's age. Being only 49 years old, he was rather young for enlarged prostate. Then the etiology—what was the cause of prostatic enlargement in this patient? Could it be attributed in part to his rheumatic diathesis? And is it not unusual to find so many symptoms simulating vesical calculus? the patient having, in addition to his terrible cystitis, the sudden arrest of urine, which was relieved by change of posture, with great pain in the glans penis. The symptoms were so urgent that the operation was performed simply to save the patient's life. Had the case been allowed to progress much longer, the inflammation would have traveled up the ureters to the kidneys, and the operation would have proved useless.

Periscope.

Hepatic Colic.

In a recent number of *La Médecine Moderne*, Professor Germain Sée discusses the always interesting and important subject of the treatment of hepatic colic. The obvious primary indication is to promote the expulsion of the gall-stone, and this, Professor Sée urges, should be accomplished by remedies which increase the flow of bile. The sufferings of the patient are, however, usually so intense that we are compelled to consider first the application of measures directed to the relief of pain. Of these by far the most speedy and effectual is the hypodermic injection of morphine. This usually acts very well, but Professor Sée warns us that in some cases the patients, after a fit of vomiting, fall into a state of alarming collapse, even when only one centigramme of morphine has been injected. We must also bear in mind that morphine is one of the substances which diminish the biliary secretion. Of antipyrin Professor Sée says that "it will only render mediocre services in this matter, and that we should not lose time by prescribing it." Chloral and chloroform have a less certain action than morphine, but possess the advantage of not hindering the secretion of bile. Professor Sée advises that chloral, if used at all, should be given by enema, as it will not be well tolerated by the stomach. He is disposed to believe that both chloral and chloroform may act favorably by relieving spasm and promoting the relaxation of the walls of the bile-duct.

The second and most scientific indication is to increase the biliary secretion. The mere presence of the gall-stone and the irritation which it excites, have a tendency to augment the flow of bile, but help may be obtained from the use of various medicinal remedies. Of cholagogues Professor Sée enumerates bile itself, turpentine and its derivatives, terpine, terpinol, benzoic acid,

salicylate of soda, and olive oil. He points out that bile is inadmissible, as its employment tends to make the biliary secretion thicker rather than to render it more fluid, as is desirable. Turpentine and its derivatives are comparatively inefficient cholagogues, but are nevertheless of some value. The "Durande remedy" owed its success to the presence of turpentine. Of two only of the remedies enumerated does Professor Sée hold a high opinion—viz., salicylate of soda and olive oil. The cholagogue action of the former of those, although pointed out by Rutherford, is hardly sufficiently recognized in this country. It seems to increase the entire biliary secretion, but more particularly its fluid elements. According to Professor Sée, it not only acts as a cholagogue, but has also an analgesic effect, which is obviously desirable in the conditions under consideration. It is advised that salicylate of soda be given with large quantities of fluid, as this seems to assist its action.

The cholagogue action of olive oil has been a subject of dispute, and was denied by Bidder and Schmidt. The later experiments of Rosenberg, however, seem to show that if the animal experimented upon be kept upon a normal diet, and olive oil be administered, "a considerable augmentation of the biliary secretion, especially of its fluid part, begins in from thirty to forty-five minutes, the maximum increase is obtained from the third to the fifth hour, and there is also a considerable increase of fatty acids which are capable of dissolving cholestearine." Professor Sée believes that clinical experience proves that the administration of olive oil both promotes the removal of the gall-stone and relieves the attendant pain and jaundice. Its *modus operandi* has been the subject of some fanciful theories. Thus it was at one time supposed that the oil actually ascended the duct and acted locally upon the impacted gall-stone. For this idea there was never any adequate foundation, and it must suffice to say that the administration of olive oil tends to increase the flow of bile and to make it more liquid. The chief objection to this line of treatment is that the oil is often badly tolerated, and that even if it be well borne at first, intolerance is quickly excited.

Professor Sée finally discusses the remedies that are contra-indicated in an attack of biliary colic. Chief among these are those medicaments which tend to excite strong peristaltic movements of the intestine, as these are apt to be propagated to the bile passages. Hence strong purgatives are injurious. Purgation should only be employed after the crisis is over, and even then with caution, as it may excite a fresh attack. Nevertheless, it cannot be wholly dispensed with, as it is desirable to clear out the bile that has found its way into the intestine. We should also avoid those substances which diminish the biliary secretion, of which Professor Sée enumerates the salts of potash, calomel, iron, copper, morphine, atropine and strychnine.

These recommendations—coming from so esteemed a source, and founded upon such ample physiological experiment and clinical trial—will be received with the respect which they deserve. Probably the point which runs most counter to ordinary practice is the advice given regarding the use of purgatives. At the crisis of the malady, when the duct is contracting violently and the patient is in extreme agony, no one would dream of giving a purge; but a little later on, when the pain has been subdued, while the impaction remains and jaundice is deepening, moderate purgation with such an agent as Glauber's salt has often proved the most efficient of all methods of treatment. Turpentine does not seem to have justified the hopes that, on theoretical grounds, were raised regarding its value in biliary colic. Salicylate of soda and olive oil are well worth a trial, and Professor Sée's recommendation will ensure their wide employment. Whatever medicinal remedies we select, it seems evident that copious draughts of warm water, to which a little soda has been added, are invariably advantageous, and it is well that so simple a measure should not be overlooked or neglected because of its simplicity.—*Lancet*, December 13, 1890.

Grafting Skin from the Dead Body.

The *Annals of Surgery*, November, 1890, says that in 1888, Drs. Bertens and Werner described a remarkable case of a boy, with intractable extensive ulcers of the legs, in which they had successfully transplanted 24 skin grafts excised from the body of a woman 75 years old about twenty minutes after her death. The perusal of this paper induced Dr. Sophia Ivanova, of St. Petersburg, to try their method in the case of a poorly-nourished woman, æt. 75 years, who had received a burn of the third degree involving the

whole leg and dorsal aspect of the foot. In about a fortnight the injured integuments sloughed away to leave an enormous freely suppurating granulating surface. The grafting, resorted to shortly after the separation of the sloughs, was made at two sittings, with an interval of three and one-half weeks, the material being derived from two new born infants' bodies, one and one-half and two hours after the children's death. During the short period elapsing between the excision and transplantation, the strips and pieces were kept in a 6: 1,000 solution of chloride of sodium at 40° C. Every one of them became firmly adherent to the surface in 48 hours, while in two or three days the epidermis began to grow around all the grafts. Speedy and sound healing ensued. Dr. Ivanova believes that this method offers undoubted advantages over Reverdin's plan, in securing more rapid healing of lesions and lessening the injurious effects of prolonged suppuration and lying in bed; it gives better functional results, through preventing cicatricial contraction; the material is easily obtainable in abundance, and that without inflicting suffering or inconvenience to any human being.

The skin must always be taken from bodies of patients who have not had syphilis, septicemia or any other infectious disease. The best material is afforded by bodies of new born infants of healthy mothers, the infantile tissue possessing most energetic vitality.

It is advisable to employ rather long strips, measuring not more than an inch or so in width. Small sized pieces are easily washed away by pus or blood. Only the skin proper, freed from all subcutaneous cellular tissue, should be transplanted. If the granulating surface is clean and not very weak, no scraping is necessary. It is sufficient to previously thoroughly wash the surface, after which the grafts should be carefully adjusted and slightly pressed down with dressing.

The best dressing material is gauze soaked in a boric acid solution, and then wrung out. This tissue absorbs secretions very well, never becomes adherent to grafts, and hence may be easily removed without disturbing the latter.

The transplantation must be practiced as early as possible; thus in cases of deep burns, it should be resorted to immediately after the separation of sloughs. When large-sized strips or pieces are used, even a free suppuration cannot prevent their adhering to the surface.

Liquid Pepsins.

The *Chemist and Druggist*, October 18, 1890, says Mr. D. L. Haigh has been abusing liquid pepsins before the Missouri Pharmaceutical Association. Amongst the things he said, and which will have occurred to many pharmacists, was that among the simple solutions of pepsin which are objectionable are the wine, elixir, aromatic elixir and elixir of pepsin and bismuth. In the last preparation the ammonio-citrate of bismuth is used. To hold this in solution it must be either slightly alkaline or neutral. Pepsin, on the other hand, must be in acid solution or it will decompose and very likely precipitate. The two substances are therefore incompatible, and the preparation is almost worthless. This is a very simple case. How is it with an alkaloid added, as in elixir pepsin, bismuth and strychnia? It is known that alkaloids must either be held in solution by means of a solvent—generally alcohol—or be converted into soluble salts by an acid. This last preparation, then, must be neutral to be stable. How long can this be the case with such a loosely-constructed salt as ammonio-citrate of bismuth, when the ammonia is being constantly carried off? The popularity of pepsin has carried its use to the extreme; although it is an invaluable remedy, like many good things it is abused. The only way to administer pepsin is in the solid form, preferably in powder. The vast number of scale pepsins are for the greater part peptones and do not possess the digestive power of the powdered pepsins. In fact, the highest digestive power pepsins are not soluble to any extent, which is another very potent reason why this article should not be used in liquid form.

There is truth in some of Mr. Haigh's statements, but he has not carried his inquiries far enough. Liquid pepsins can easily be made which possess high digestive power. For years we have pointed out that the minimum amount of alcohol should be used for the preservation of these preparations, as alcohol in certain amount precipitates the ferment. Mr. Haigh appears to overlook the fact that the pepsin ferment is a soluble body. We have no evidence that it is insoluble in alkaline media; the question is: Is it desirable to administer it in such media? We know that in that condition it is inactive, but how long will it remain alkaline in the stomach?

That there is great ignorance regarding

pepsin is evidenced by the fact that some time ago a medical journal, whose opinion is highly valued, stated that it had tested one of the pepsin preparations which Mr. Haigh objects to, and from the amount of *starch* which it converted, it had been led to form a high opinion, etc. The manufacturers actually advertise this testimonial!

Peroxide of Hydrogen.

The *University Medical Magazine*, December, 1890, says editorially that peroxide of hydrogen is a drug which has been gradually and steadily gaining in favor, and which has yielded to each who has faithfully tried it results so constant and so satisfactory that he has learned to depend upon it. As ordinarily found in the shops, peroxide of hydrogen is a 3.2 per cent. solution, yielding fifteen times its bulk of oxygen. This solution is far more potent than is water charged with fifteen times its volume of oxygen, since in the peroxide preparations the gas is given off in its nascent state and is peculiarly powerful in its chemical affinities.

There is abundant evidence as to the value of the peroxide, from both the clinical and the experimental standpoint. The number of those who have reported excellent results from its use is very large, and to this must be added the testimony of the bacteriologists, who find in this drug a potent and almost immediate germicide. It is devoid of septic properties, its worst effect being, when used in a too concentrated form, to cause some local pain and irritation. It is applicable in all cases where pus is present, and where the discharge is foul and profuse its effect is admirable. In suppurating otitis media, in purulent conjunctivitis, the aurists and ophthalmologists have long prized it as one of their most valuable medicaments. In the sloughing inflammations following scarlet fever and diphtheria, the laryngologists place great confidence in its powers. Surgeons, however, in whose work it might prove generally valuable, have been somewhat slow to recognize its virtues. But its use in a great variety of sloughing and suppurating cases has given results better than those obtained from any other germicide—bichloride of mercury not excepted. Where the discharging area is represented by a surface of granulations, the drug can be applied by means of an atomizer. This enables a small quantity to reach every portion of the infected surface. In the case of a suppurating fistula or cavity, the peroxide may be injected by means of a syringe. Immediately following its application to a purulent surface, an active effervescence goes on, and every particle of pus which it reaches is destroyed. Not only this, but the microbes, the active agents of pus formation, are also devitalized, so that a large surface can sometimes be rendered aseptic by one or two thorough applications. Even if this result is not reached, the discharge is greatly lessened, and it is by no means uncommon to see a case, in which the pus had amounted to drachms, so favorably affected that the dressings contain but a few drops of purulent matter.

The strength in which the fifteen volume solution is used will vary with individual cases. It can be employed without harm in full strength. Where this is painful, one, two or four parts of water may be added.

Fatal Uremia in Persons Apparently Healthy.

The *New York Medical Journal*, November 15, 1890, says Dr. A. Westphal has described an interesting case, in the *Berliner klinische Wochenschrift*, of uremic coma resulting fatally in a person apparently in a fair state of health. A young man, twenty-four years old, a joiner, was admitted into the hospital with sudden symptoms of difficulty of breathing, palpitation, swelling of the feet and ankles, and left-sided headache. His history was that of a feeble childhood, but without any serious illness. His feet had never swelled before, there had been no difficulty with the urine, and he had always been able to attend to his heavy work. He had not been a drinker, had not had syphilis, and had not been a worker in lead, and there was no ascertainable heredity. His face was swollen, his ankles were œdematous, and he was manifestly anemic. The heart was hypertrophied somewhat, the sounds were weak but pure, with no accentuation of the pulmonary or aortic second sound. The pulse was small, regular and without distinct tension. The urine was clear, acid, of the specific gravity of 1.005, with some albumin, hyaline casts and leucocytes. There was nothing abnormal in the internal organs or the blood, but there was albuminuric retinitis. During the first few days of

his treatment at the hospital the subjective symptoms lightened up decidedly, and he expressed himself as feeling quite well and gave the impression of being not seriously ill. The albumin remained at a small amount, and the quantity of urine varied between forty-five and fifty-eight ounces *per diem*, with a specific gravity of from 1.003 to 1.006. Five days after his admission, aphasic symptoms made their appearance as the forerunner of a severe uremic attack, which set in with full force during the night; there were both clonic and tonic convulsions, frothing at the mouth and loss of consciousness. The temperature rose to 103.8° F., the respirations to 60 and the pulse to 160, the cardiac dulness being increased to the right. Death ensued in deep coma from pulmonary œdema. On autopsy, both kidneys were found to be contracted, the right one being somewhat peculiarly displaced, being depressed and lying opposite the fourth and fifth lumbar vertebræ; it was extremely small, not more than two inches long by less than an inch broad, and appeared as a grayish-red fibrous mass with the blood-vessels small and not thickened; from these facts, as well as the microscopic appearances, the condition was judged to be congenital. The case was remarkable as occurring in a young person, without previous uremic symptoms, who was apparently doing well when he fell into a state of profound coma and died in what was, so far as was known, his first seizure.

The Treatment of Burns.

In the Friedrichshain Hospital in Berlin the following is the method of treatment of burns employed by Dr. Bardeleben.

The burned surface is first carefully washed with a two or three per cent. solution of carbolic acid or a three per mille solution of salicylic acid. The blisters are then opened, and the entire surface covered with subnitrate of bismuth finely powdered, and over this a layer of cotton-wool. This dressing is to be renewed as soon as it becomes at all moistened by discharges from the wound. If the burn is very extensive, an ointment of bismuth is substituted for the dry powder.

Dr. Bardeleben asserts that with this dressing cicatrization is much more rapid and suffering much more quickly relieved than is the case with any other form of treatment.

He states that, in spite of the large quantities of bismuth which he has employed, he has never seen any symptoms of poisoning follow its use.—*Therapeutic Gazette*, November, 1890.

Dyspepsia of Children.

The *Annals of Gynecology*, November, 1890, says that according to Jules Simon, dyspepsia is sometimes the early manifestation of a neuropathic state in girls from 6 to 8 years old. The treatment he suggests is:

1. Tonic. General treatment, hydrotherapy, diet and regimen.

2. Sedative. Administer at each meal, well diluted, 3-5 drops of:

℞ Tr. belladonnæ.
Tr. opii camphorat. . . . . āā f℥ss. M.

After the meal prescribe a powder composed of:

Codeiæ . . . . . gr. 1-30 — gr. 1-15
Magnesiæ
Pulv. oculi cancrorum . . . . āā gr. iss
Pulv. rhei . . . . . gr. j
Ext. nucis vomicæ . . . . . gr. 1-6 M.

3. As an eupeptic before meals administer one or two teaspoonfuls of the following, well diluted.

℞ Tr. cascarillæ.
Tr. nucis vomicæ . . . . . āā f℥ij
Tr. rhei . . . . . f℥ss
Tr. aurantii amar.
Tr. gentian. . . . . āā f℥j. M.

Lantanine as Febrifuge.

The *Journal de Médecine*, October 12, 1890, speaks of an alkaloid extracted from the *Lantana Brasiliensis* or *Verba sagrada*. It is described as a white body, in the form of a fine powder, bitter, presenting alkaloid reactions and forming salts with acids. It exerts a moderating action upon the circulation, like that of quinine, retarding nutrition and lowering temperature. It is employed in intermittent fevers and as an antipyretic. In intermittent fevers it should be administered immediately after a paroxysm. It often succeeds where quinine has failed. The dose is fifteen or thirty grains a day, in pills.

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NEVER ROLL A MANUSCRIPT! Try to get an envelope or wrapper which will fit it.
When it is desired to call our attention to something in a newspaper, mark the passage boldly with a colored pencil, and write on the wrapper "Marked copy." Unless this is done, newspapers are not looked at.
The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

IMMIGRATION AND PUBLIC HEALTH.

The influence of the enormous immigration which yearly adds hundreds of thousands of human beings to the population of the United States deserves the most careful study of all who are interested in its moral and physical welfare. The economical relations of immigration get a fair share of attention from Congress; but moralists and physicians will have to take the matter up, if the relations spoken of above are to be wisely regulated.

Dr. Hamilton, Surgeon-General of the Marine Hospital Service, has been considering this subject and recommends more rigorous inspection and restriction of immigration.

He suggests that the law be amended so as to provide that hereafter any person intending to immigrate into the United States shall produce to the United States Consul nearest him evidence that he has not been convicted of any crime; that he has not at any time been a public charge in the country where he lives, and that he has not at any time received public assistance. And, further, that he produce to the Consul a certificate from a legally qualified resident physician to the effect that he is at the time suffering from no contagious or chronic disease or disability such as would make him a public charge. This paper should also set forth whether the immigrant intends to become a naturalized citizen or merely a temporary inhabitant. These suggestions cover a good deal of ground, part of it being in the department of political economy. As physicians we are especially interested in the proposition to submit intending immigrants to a strict scrutiny as to their physical soundness, or at least their freedom from grave disease. Just now American experimenters with Koch's "lymph" find it hard to get a subject with lupus to operate upon, and it would be a good thing if the law made it impossible for our European friends to send any of their too numerous lupus afflicted countrymen here. So, it would be well to make leprosy or syphilis and some other diseases which need not be named, a bar to immigration. In this way a certain element of danger to our country would be eliminated from its development and a better chance would be afforded to eradicate certain diseases which have acquired a real, although as yet a slight foothold in this country.

We trust that Dr. Hamilton's suggestion will not be allowed to fall, but that he and the members of the profession generally will try to get it into such shape that Congress can and will act upon it.

TRANSFUSION OF BLOOD AND SALT SOLUTION.

Dr. John Marshall, of the University of Pennsylvania, has published in the *Zeitschrift für Physiologische Chemie*, November 11, 1890, a very interesting article in regard

to the transfusion of a mixture of defibrinated blood and salt solution. After briefly indicating the present position of the question of the use of salt solution in transfusion, he gives an account of a number of experiments, in which he used a mixture of one part of defibrinated blood of the animal on which he had made the experiment, and nine parts of a 6 to 1,000 solution of chloride of sodium. The result of this method of transfusion was exceedingly satisfactory. The results were studied not only as to the general appearance of the animals, but also by careful investigations of the chemical and microscopical conditions of the blood after transfusion. A similar process could be carried out in the case of human beings, of course, using a mixture of human blood with a salt solution. Salt solutions alone are of a recognized value in preserving life after great loss of blood, but the addition of a certain proportion of blood containing living corpuscles, furnishes something besides the mere mechanical distension of the blood-vessels with an innocent circulating fluid, as is the case in transfusion of salt solution alone.

PROPOSED MEDICAL EXAMINERS' BILL FOR PENNSYLVANIA.

At a meeting of the State Medical Society at Pittsburgh, in June, 1890, a Committee on Medical Legislation, consisting of the Presidents of the different County Societies throughout the State, was appointed. This Committee met at Harrisburg, September 17, 1890, and, after consultation, appointed an Executive Committee of seven to draft a proper bill and present it to the meeting of the General Assembly in January.

The bill may not suit each individual member of our profession, but the Committee, after due deliberation, thinks it is the best that we can ask for at this time, and it appeals to the members of our profession in Pennsylvania to give it their support, and see to it that their individual influence is used with their representatives for its passage.

The text of the proposed law will be found in another part of this issue of the REPORTER. We give it for the information of our readers, and hope it will secure their approval and support. Especially do we commend to their notice the intimation of the Committee that it may not exactly suit everybody, and urge that they avoid the risk of losing all by proposing unimportant changes over which disagreement might arise.

The REPORTER thinks this Bill would do much to protect the community, to raise the credit of the State and to elevate the standing of the profession, and will do what it can to secure its passage.

INCORPORATION OF THE PENNSYLVANIA STATE MEDICAL SOCIETY.

On December 20, 1890, the Medical Society of the State of Pennsylvania was incorporated by a decree of the Court of Common Pleas of Philadelphia. This is the outcome of a resolution adopted at the last meeting of the Society, by which a Committee was instructed to secure the incorporation of the Society. It is well that the members of the Society shall understand certain effects of this action. At the next meeting of the Society it will be necessary: 1. To adopt a set of By-Laws (which may be the old ones or any modification of them which may be desired); 2. To fix the date of the annual meeting for the election of Trustees; and, 3. To choose three Trustees to serve for one year, three to serve for two years and three to serve for three years. Each year thereafter three Trustees are to be chosen to take the place of those whose terms expire. The Trustees to act until the meeting of the Society are the members of the present Judicial Council.

The incorporators will be obliged to provide for the perpetuity of the membership by electing such other members as they may see fit—presumably all the present members

—and providing a method by which hereafter new members shall be chosen.

According to law, the Treasurer will hereafter be compelled to give a bond in such sum, and with such sureties as may be required by the By-Laws for the faithful performance of his duties.

Book Reviews.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the Reporter.]

RECHERCHES CLINIQUES ET THÉRAPEUTIQUES SUR L'EPILEPSIE, L'HYSTÉRIE ET L'IDIOTIE. Compte rendu du service des enfants idiots, épileptiques et arriérés de Bicêtre pendant l'année, 1889.

CLINICAL AND THERAPEUTICAL INVESTIGATIONS OF EPILEPSY, HYSTERIA AND IDIOCY. From the service for idiotic, epileptic and feeble-minded children of the Bicêtre Hospital for the year 1889. By Bourneville, Physician to the Bicêtre; Sollier, Curator of the Museum of the Bicêtre; and A. Pilliet, Former Interne of the Service. Vol. x, 22 wood-cuts and one chromo-lithograph. 8vo, pp. lvi, 188. Paris: Office of the *Progrès Médical*, 1890. Price, five francs.

The first part of the volume before us contains the report proper of the Bicêtre Hospital, with the number of the patients, the classes to which they belong, and the general working of the institution. Following the report are articles on bromide of gold, bromide of camphor, and picrotoxine. The first is believed to have a favorable action on nutrition, and some effect in modifying epileptic seizures. The bromide of camphor acts well in controlling epileptic vertigo. Picrotoxin exerted no favorable influence upon the vertigo. Following these therapeutical papers, Bourneville contributes a very valuable article on "Myxœdematous Idiocy," fully illustrated. Pilliet follows with a paper on "Chronic Encephalitis of Childhood." The histological appearances especially have been studied. The next paper is on "A Family of Hysterical Patients," by Bourneville and Sollier; and, in a concluding paper Bourneville contributes a "Fresh Observation of Myxœdematous Idiocy."

The entire volume will be welcomed most warmly by all neurologists. We sincerely hope that it may be followed by many equally valuable.

AN EPITOME OF TRIPLER'S MANUAL, AND OTHER PUBLICATIONS ON THE EXAMINATION OF RECRUITS. By Charles R. Greenleaf, Major and Surgeon, U. S. A. 8vo, pp. 70. Washington, D. C.: William Ballantyne & Sons, 1890. Price, 75 cents.

Since the publication of Tripler's Manual, much has been written on the general subject of physical examinations, and a number of changes have been announced in such examinations for the United States Army. The author states this fact in the preface to this pamphlet, and says that the recent information on the subject has been incorporated in this "Epitome." The application of the vision-test is explained; instructions for chest measurements are revised, and the subject is in other ways brought up to date.

The Epitome will prove invaluable to recruiting officers, and we can cordially recommend it to all who are interested in physical examinations.

TRANSACTIONS OF THE NEW YORK STATE MEDICAL ASSOCIATION FOR THE YEAR 1889. Volume VI. 8vo, pp. 445. Concord, N. H.: Republican Press Association, 1890.

This volume contains the papers read at the sixth annual meeting of the New York State Medical Association, in New York, September 25–27, 1889. The President's address, by Dr. William T. Lusk, was on Tubal Pregnancy, and is a very able presentation of the subject. In addition to a number of interesting papers, there were two principal subjects of discussion: The Treatment of Hernia, and the New Hypnotics. Speaking of medical operations for the cure of hernia, Dr. Bull said that his sixty-nine cases gave sixty per cent. of cures and forty per cent. of relapses. He prefers the operation of ligation, with excision or drainage of the sac. The discussions upon both subjects were very free and full, and amply justified the wisdom of the Committee on Arrangements in selecting them.

The volume as a whole is a handsome one, and creditable in the highest degree to the Association, and to the Editor, Dr. Edward K. Dunham.

Special Article.

KOCH'S REMEDY FOR TUBERCULOSIS.

A RESUMÉ OF ITS HISTORY.

[*Continued from page 25.*]

The *Wiener Med. Presse*, Dec. 14, 1890, contains the text of the Decree of the Minister of the Interior of Austria regulating the use of the Koch lymph in the Austro-Hungarian Empire. This decree, on the ground that the lymph is a secret remedy with acknowledged dangerous properties, restricts its use to heads of hospitals and scientific medical institutions and physicians authorized to practice in the Empire. It indicates the source from which the lymph must be procured and provides for the making of full records of all cases so treated and the report to the authorities of the circumstances under which any death may take place.

The *Progrès Médical*, Dec. 14, 1890, says that the Germans are becoming more circumspect in regard to the cures—or rather ameliorations—effected with Koch's lymph. It cites from the *Internationale Klinische Rundschau*, Dec. 7, the case of a girl seventeen years old, at Innsbrück, who died after

an injection for lupus of the face. Reaction after injection of 2 milligrams was rapid and marked. The temperature rose to 41.5° (106.7° Fahr.); the respiration became 60; the pulse became imperceptible, and the girl became unconscious and died in 36 hours, with signs of paralysis of the heart. The lymph was obtained from Dr. Libbertz (Koch's authorized agent). Every precaution had been used in diluting it. The autopsy furnished no explanation of the girl's death, which was the more unexpected because she was vigorous and well developed.

In the *Berliner Klinische Wochenschrift*, December 15, 1890, Dr. R. Heinz, of Breslau, publishes a paper on his experimental studies of iodide of potassium and proposes that this salt shall be systematically used in connection with injections of Koch's remedy, because of its apparent power to promote the activity of the leucocytes.

The *Bulletin Médical*, December 17, contains a report of a third lecture by Cornil, in which he speaks, after having used the Koch remedy on thirty patients, as to the temperature change and the variations in the oxyhemoglobin of the blood after its injection. As to the former, he calls attention to the way in which the lymph may seem to delay its action and then suddenly act with exceptional force. The oxyhemoglobin, he finds, diminishes, and for this reason he thinks that the remedy must be used with caution in pulmonary tuberculosis, except in cases in which fever is absent or moderate. He seems to think the remedy may be useful in lupus, but claims very little for it in phthisis.

In the same journal Lannelongue reports using the lymph upon a boy eight years old with lupus of the face. After the third injection he became quite ill; he had a confluent papular eruption and inflammation of the knee, the elbow, the wrist, the shoulder, the hip, and even of the cervical portion of the spinal column. Lannelongue says that if this had occurred after the first injection this would have been claimed to have revealed foci of latent tuberculosis; but as it came on eight days after the first injection it may be asked if it was not due to the action of the lymph setting up new foci of tuberculosis.

The Scotch correspondent of the *Medical Press and Circular*, December 17, 1890, says: "During last week at the Royal Infirmary of Glasgow three cases of lupus were treated with hypodermic injections of Koch's fluid with the following results. In two of the cases so far as curative or other effect was observed they might as well have been injected with cold water, for neither beneficial nor prejudicial effect could be noticed. In the third case there was, to use the cant phrase which is on every person's tongue just now, a decided 'reaction.' The seat of the disease became swollen and congested, and coincident with the subsidence of these effects, and at the present time, the diseased parts certainly look more healthy. The inference drawn in such cases is that lupus is a tubercular disease, that tubercle is due to a microscopic germ termed the tubercle bacillus, and that whatever kills or causes the death of the bacillus, no matter in how roundabout a way, cures the disease; and phthisis pulmonalis as well as lupus consequently. Now it must be pointed out that pathologists are not at all agreed as to lupus being a tubercular disease, and it does not necessarily follow that if a remedy is found for lupus that the dreadful scourge of consumption would be equally amenable to the same influence. Here in three cases of lupus under the observation of the writer, but one of them responded to the Koch fluid, and it would be premature to say as yet that the disease is either arrested or cured in this one case. Again, most men of any experience in practice have occasionally experienced gratifying results in the treatment of certain cases of lupus, from well-known and ancient remedies of the pharmacopœia. The writer has cured cases of lupus more than twenty years ago, in the sense in which lupus is now said to be cured, by combinations of bichloride of mercury, iodide of potassium and arsenic (Donovan's solution), and he entertains the opinion that the hypodermic injection of these substances in proper quantity would yield results not inferior to those of Koch's fluid, so inordinately and so injudiciously vaunted. The French have had most favorable results with hypodermic injections of iodoform dissolved in olive oil. It is not a little significant in this relation that Billroth, of Vienna, a gentleman of acknowledged eminence throughout Europe, has expressed the opinion that as a curative agent in lupus iodide of potassium is superior to 'Koch's lymph.' In the case of the phthisical cases treated in the Royal Infirmary of Glasgow, a trifling reaction took place in one or two of them, that is to say, the temperature rose considerably, but so far as amelioration of the urgent symp-

toms was concerned, this existed only in the luxuriant imagination of the sanguine converts to the new doctrine. In other cases of undoubted phthisis no result whatever ensued."

The same journal says: "If Koch's lymph is scarce at Berlin it is abundant at Davos Platz, where the arrival of some twenty-five phials was announced a few days since, being enough to treat a thousand patients for a couple of months! Consumptive patients at Davos, however, probably feel pretty comfortable, for only about a hundred of the fourteen hundred tuberculosis residents elected to undergo the treatment, the others preferring to run the risk of having to attend the funerals of those to be experimented upon."

In the New York *Medical Record*, Dec. 27, 1890, there is an article by Dr. H. P. Loomis, describing his trip to Berlin to get lymph for the Bellevue Hospital, and his observations and opinions. He has apparently been very much impressed by what he saw. Under the head of "Conclusions" he says: "If I were asked to express an opinion as to the efficacy of the new remedy, I should say I believe it to be as great a medical discovery as that made by Jenner; that it opens up a hitherto unknown field in the treatment of disease, which no one at the present time can limit; that it apparently cures lupus, as admitted by all observers.(!)" With regard to its curative power in pulmonary tuberculosis, he quotes the answers made to a series of questions he addressed to Prof. Leyden a few days before leaving Berlin. The substance of the answers is that Prof. Leyden has noticed *permanent* improvement in some cases of early phthisis following the use of the remedy, but thinks time can alone show how frequent such cases are; that he has seen improvement in some advanced cases; that he would use the remedy on his own child; that he favors its use in private practice; that he has seen disastrous effects following its use in unsuitable cases and in overdoses; that as a precaution he would administer small doses, beginning with from 1 to 5 milligrams;[1] that he continues constitutional treatment while using the remedy; and that it has no *positive* diagnostic value in all cases.

In New York experimentation with the lymph continues.

At St. Francis Hospital, December 24, Dr. George F. Shrady inoculated seven cases, two for tubercular disease of knee-joint; one for tubercular caries of wrist-joint; one for carious sinus of thigh; one for scrofulous sinus of groin; one case of incipient phthisis, and one case of phthisis in second stage. The latter was a patient of Dr. John H. Ripley. The inoculations were prepared under the supervision of Drs. Max Einhorn and E. C. Wendt, and according to the strict Berlin method.

The *Medical Record*, December 27, says that, in a general way it may be said that no new features have been developed. The reactions in the phthisis cases have been quite constant, as also in the cases of lupus, the latter having been reported as improving. The doses have generally been one milligram, which has been cautiously increased in accordance with the amount of reaction produced. As yet no accidents nor serious complications have occurred in connection with the inoculations; neither has there been any death attributable to their use.

Notes and Comments.

Proposed Act for Medical Examiners for Pennsylvania.

An Act to regulate the Practice of Medicine and Surgery, to establish a State Board of Medical Examiners and Licensers, to define the powers and duties of such Board, the qualifications of applicants for license, the manner of licensing, and making an appropriation for said Board.

Whereas, The safety of the public is endangered by incompetent physicians and surgeons, and due regard for public health and the preservation of human life demands that none but competent and properly qualified physicians and surgeons shall be allowed to practice their profession:

Section 1. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met, and it is hereby enacted by authority of the same, that within one month after the passage of this Act the Governor shall appoint a State Board of Medical Examiners and Licensers consisting of nine members, three to serve for one year, three for two years, and three for three years in the first instance, and thereafter annually

[1] A dose of 2 milligrams killed the girl at Innsbrück, spoken of above.—Ed. Reporter.

the Governor shall appoint three members to serve for three years in place of those whose terms then expire. The said persons so appointed shall be graduates of some legally-chartered college or university having the power to confer medical degrees, citizens of the United States and of this Commonwealth who shall have been in the active practice of medicine or surgery for a period of not less than ten years, but no two of whom shall be residents of the same county.[1] Each member of the said Board shall receive a certificate of appointment from the Govenor, and shall file the same within twenty days with the Prothonotary of the Court of Common Pleas of the county in which said member is registered under existing law.

SECT. 2. The said Board shall be known by the name and style of the State Board of Medical Examiners and Licensers of the Commonwealth of Pennsylvania, and shall have a common seal, and may make and adopt all necessary rules and regulations and by-laws not inconsistent with the Constitution and laws of this Commonwealth, or of the United States, and shall have power to locate and maintain an office within this State for the transaction of business. Five members of the said Board shall constitute a quorum for the transaction of business.

SECT. 3. Every appointment to fill a vacancy or vacancies in the said Board shall be for the unexpired term, and the said vacancy or vacancies shall be filled by the Governor within sixty days after notification of the same by the Board, and he shall have power to remove any member of said Board for criminal, scandalous, or dishonorable conduct.

SECT. 4. The said Board shall organize at Harrisburg within three months from the date of their (its) appointment, and shall elect from its own number a President and Secretary who shall also act as Treasurer, both of whom shall hold their offices for one year, or until their successors are chosen.

SECT. 5. The members of the said Board shall each receive a salary not exceeding three hundred dollars per annum, to be paid out of the fees for examination. The Secretary-Treasurer shall receive an additional salary to be fixed by the Board, and shall file with the President of the Board a bond in the sum of one thousand dollars, conditioned for the faithful performance of his duties. The necessary expenses of the said Board shall also be paid out of the fees, except as provided in Section 12 of this Act, and any balance remaining from the fees, after the disbursements herein specified, shall be paid into the treasury of the Commonwealth.

SECT. 6. The said Board shall examine all applicants for license to practice medicine or surgery in this Commonwealth who are properly qualified according to the provisions of Section 7 of this Act, and no one shall be excluded or rejected on account of adherence to any special system or school of practice. It shall hold two stated meetings in each year, one at Pittsburg on the first Tuesday of April, and one at Philadelphia on the first Tuesday of May respectively, and may hold special meetings at such times and places as it may deem proper. All examinations, when practicable, shall be conducted in writing, and all examination papers, together with the reports and action of the examiners thereon, shall be preserved among the records of the said Board for a period of five years, during which time they shall remain open for inspection at the office of the said Board.

The applicants shall be examined in anatomy, physiology, chemistry, toxicology, pathology, hygiene, materia medica, and therapeutics, principles and practice of medicine, surgery, and obstetrics, and each applicant upon receiving from the Secretary of the Board an order for examination shall draw by lot a confidential number, which he or she shall place upon his or her examination paper, so that when said papers are passed upon by the Examiners the latter shall not know by what applicant said papers have been prepared, and upon each day of examination all candidates shall be given the same set of questions. *Provided* that any candidate for examination may elect the system of materia medica and therapeutics in which he or she shall be examined.

SECT. 7. Any person on paying twenty dollars to the Secretary of said Board, and on presenting satisfactory proof of being over twenty-one years of age, of good moral character, and of having received a sufficient preliminary education, as defined by said Board, and a diploma from some legally-incorporated medical college or university having authority to confer degrees in medicine, shall be entitled to examination by the said Board, and in case of failure at any examination shall have the privilege of sub-

[1] And none of whom shall be member of the faculty or staff of any medical school or university.

sequent examinations without the payment of an additional fee. Each applicant who shall have passed a satisfactory examination shall receive from the said Board, under seal, a license to practice medicine and surgery in the Commonwealth of Pennsylvania, and the said Board may at its discretion grant licenses without examination to persons holding licenses from similarly-constituted boards of examiners or boards of health in other States.

SECT. 8. The Secretary shall record in a book to be kept for this purpose in the office of the said Board, the name, age, sex, residence, date, and place of examination, the examination number, the examination average on each branch, the general average, and date of issue of license, in case such license is granted. Said book shall be open to public inspection, and on or before the last day of December of each year the said Board shall publish, or cause to be published, a list of the names and addresses of such persons as shall have received licenses from the said Board within twelve months immediately thereto preceding.

SECT. 9. After the first day of July, Anno Domini one thousand eight hundred and ninety-one, no person shall enter upon the practice of medicine or surgery in the State of Pennsylvania unless he or she has complied with the provisions of this Act, and shall have exhibited to the Prothonotary of the Court of Common Pleas of the county in which he she desires to practice medicine or surgery, a license duly granted to him or her by the said State Board of Examiners and Licensers, whereupon he or she shall be entitled, upon payment of one dollar, to be duly registered in the office of the Prothonotary of the Court of Common Pleas in said county, and any person violating any of the provisions of this Act shall be guilty of a misdemeanor, and upon conviction thereof in the Court of Quarter Sessions of the county where the offence shall have been committed, shall pay a fine of not less than one hundred dollars nor more than five hundred dollars for each offence, one-half of which fine shall be paid to the prosecutor.

SECT. 10. Nothing in this Act shall apply to commissioned medical officers of the United States Army or Navy, or of the United States Marine Hospital Service, nor to any member of the house or resident staff of any legally-chartered medical college or university or hospital during his term of service therein, nor physicians of other States meeting duly registered physicians in this State in consultation, nor to those practicing dentistry exclusively. And nothing in this Act shall be construed to prohibit the practice of medicine and surgery within this Commonwealth by any practitioner who shall have been duly registered before the first day of July, Anno Domini one thousand eight hundred and ninety-one, according to the terms of the Act entitled "An Act to provide for the registration of all practitioners in medicine and surgery," approved the eighth day of June, Anno Domini one thousand eight hundred and eighty-one.

SECT. 11. For the purpose of this Act, the words "practice," "medicine" or "surgery" shall mean to treat, operate on or prescribe for any physicial ailment of another. But nothing in this Act shall be construed to prohibit service in cases of emergency or the domestic administration of family remedies.

SECT. 12. The sum of one thousand dollars, or so much thereof as may be necessary, is hereby appropriated to meet the necessary and legitimate expenses of the said Board for the year Anno Domini one thousand eight hundred and ninety-one.

SECT. 13. All Acts or parts of Acts of Assembly inconsistent herewith shall be and are hereby repealed.

Medical and Surgical College of New Jersey.

The District Medical Society for the County of Hudson, N. J., recently adopted the following preambles and resolutions:

WHEREAS: A certain medical institute, called the "Medical and Surgical College of the State of New Jersey," chartered by special Act of this State, approved March 17, 1870, was organized during the year 1888, and opened in three small rooms on the top floor of the general office building, No. 47 Montgomery street, Jersey City; and

WHEREAS, Said alleged college has graduated several students whose diplomas have been presented to the Hudson County Board of Health, and who have been refused registration; and

WHEREAS, It has appeared to this Society, by good and sufficient evidence, that several members of the faculty, nearly all of whom are non-residents of this State, are either incompetent to deliver lectures on the topics assigned them, or are graduates of

disreputable or fraudulent medical colleges; that the facilities for instruction in said alleged college are totally inadequate, and that no clinics, dissections or hospital practice have been or can be given; that the provisions of the charter of said college have not been observed by the authorities thereof; that the requirements of said charter, even if the same were strictly followed, are far below the standard of minimum requirements of medical colleges adopted and demanded by all medical authorities at the present time, and that, therefore, the possession of a diploma from said alleged college is no proof whatever that the holder thereof has received a good and sufficient medical education; and

WHEREAS, The State Board of Medical Examiners of this State will introduce a bill at the next meeting of the Legislature for the purpose of repealing said charter:

Be it Resolved, That the District Medical Society for the County of Hudson does hereby earnestly protest against the existence of said alleged college as an unnecessary, inadequate and disreputable institution, tending to degrade and lower the standard of the medical profession; that the influence of this Society and of the individual members thereof be given to the support and passage of the bill to repeal said charter, and that a copy of this resolution be forwarded to the several medical societies of this State with requests for their support and influence for the passage of said bill.

These resolutions are attested by Henry B. Rue, M. D., Secretary, Jersey City, N. J., December 16, 1890.

[As the REPORTER exposed the methods of this "college" in an Editorial, August 24, 1889, it will be understood that we find no hesitation in supporting the purpose of the Hudson County Society and of the New Jersey State Board of Medical Examiners. It will be a good work if this Board can get the State freed from the institution which now bears its name.]

Dilatation for Dysmenorrhœa.

In the *Weekly Medical Review*, December 6, 1890, Dr. Paul J. Barcus, adopting largely the views of Dr. W. G. Wylie, of New York, makes a plea for rapid dilatation of the cervix uteri for dysmenorrhœa. Of the mode of carrying out rapid dilatation, he says that care in the selection of cases is not the only essential to successful treatment. The operation must be carried out in detail, and attention must be equally directed to the after-treatment, both constitutional and local. The proper time for operating is about one week after a menstrual period, which will allow sufficient time for the lacerated mucous membrane to recover before the next period. Before commencing, all peri-uterine tenderness must be subdued, as it gives no promise of good results if there is pelvic peritonitis or cellulitis, or any degree of inflammatory process in the adnexa. With these conditions present it becomes an operation fraught with great danger to the life of the patient. Endometritis or metritis without implication of the surrounding tissues, or flexions or versions do not contra-indicate.

A bivalve dilator should be used. The patient should be anæsthetized, the blades should be introduced closed up to the shoulder, and should engage the internal os sufficiently to dilate it without slipping. The blades should be slowly and carefully spread to the extent of three-quarters or one inch and allowed to remain so for several minutes, care being taken to avoid slipping of the expanded blades out of the cervix, and consequent laceration of its tissues. The dilators being then removed, a hollow, hard-rubber stem should be introduced, one of sufficient length to engage the fibers of the internal os (about two and a quarter inches), and sufficiently large to maintain dilatation to some degree, and tapering from the point, the better to insure its retention. This should be supported for from twenty-four to forty-eight hours by a cotton tampon saturated with boroglyceride, by which time the fibers of the internal os will have contracted down upon the stem sufficiently to retain it in its place, without the assistance of the tampon. If the stem causes any degree of irritation it should be removed, to be reinserted when all irritation has subsided. But it will be found that but few patients will complain of it, and many will be ignorant of its presence if not so informed.

The patient should be kept in the recumbent position for four or five days, or until the immediate effects of the operation have subsided. If there is no obstruction of the stem, and it causes no inconvenience, it may be left in position during the next sickness. Ordinarily it should be removed before, to be reinserted again. The use of the stem obviates the necessity for using intra-vaginal pessaries, and for repeating the dilatation;

serves to correct the position of the uterus; and its presence within the canal and body of the organ seems to exert a therapeutic effect upon the mucous membrane and nerves distributed to those parts, and upon the nutrition and functions of the organ itself, that can hardly be accounted for by the better drainage and corrected position alone.

The condition of the patient is such that the constitutional treatment must be carried on at the same time, and with equal care. Most cases require a course of general tonics, and especial care as to the usual influence brought to bear upon the mind of the patient. They do better when removed from the sympathetic watchfulness of friends and relatives.

By carrying out this method of treatment but few cases will be found that cannot be relieved. Dr. Barcus's experience in the past convinces him that the large majority of so-called intractable cases are obstinate because of the imperfect manner in which the treatment has been executed.

Testing Water.

Among the scraps of erroneous information which appear in scientific journals with more or less regularity, is one about testing the purity of water by the addition of a little pure sugar. It is said that when water is so treated, any organic matter present is after a time discovered in the form of black specks floating in the liquid.

This scrap is on its rounds again, having possibly made a transatlantic journey since its last appearance here, and the method referred to is now credited to a professor in a Western university.

The truth about the matter, as has before been stated in this journal, is that the test referred to was originally proposed by Heisch for the detection of a fungus supposed to be peculiar to sewage. Pure sugar was added to the suspected water in the proportion of about half a gram to 100 cubic centimeters in a stoppered bottle, and the bottle being placed in a strong light was kept at a temperature of 80° F. for several hours. It was then examined for the fungus, which if present was disclosed as a distinct turbidity to the naked eye, and under a power of 250 diameters was found to consist of small spherical cells. Heisch believed that the cells thus developed were distinct evidence that the water was contaminated with sewage, but Frankland showed that the spores of this particular fungus were present in all waters that had been exposed even momentarily to the air, and that their development was due simply to the presence of phosphates in the water. The addition of even a minute trace of any phosphate was sufficient to develop the fungus in any water under the conditions above stated.

From this it will easily be seen that the so-called sugar test is not only of no value for the purpose for which it was recommended, but is positively misleading, and consequently dangerous.

It ought to be well understood that there is no "handy" test for the purity of water. It is sometimes easy enough to show very promptly that a given water is unfit for drinking, but to make sure of its safety is quite another matter.

It is very evident that the dissemination of misinformation on such a subject is calculated to do much harm, and those who are concerned with preserving health should not fail to show, whenever opportunity offers, the danger of forming conclusions as to the purity of water by "popular" or easy tests.—*Druggists' Circular*, December, 1890.

Guaiac as a Purgative.

Dr. William Murrell, Lecturer on Pharmacology at Westminster Hospital, says in the *Medical Press*, Nov. 5, 1890:

In our thirst for new remedies there seems to be a danger that some of our good old-fashioned drugs may be forgotten. Take guaiacum for example. In most of our text-books on materia medica we are told that guaiacum resin acts as "a stimulant, diaphoretic and diuretic." I cannot find that there is much evidence in support of this view. Wood, of Philadelphia, seems to be of the same opinion, for he says: "Guaiacum is believed by some to act as a diaphoretic, and to do good by increasing the elimination of the skin, but as I have not been able to obtain either from medical literature or from the exhibition of the medicine any distinctive proof of its having any such action to any marked extent, I have preferred to consider the drug as an alterative." Schmiedeberg, of Strassburg, curiously enough deals with it under the head of "Drugs and preparations used for all sorts of purposes but now mostly antiquated and obsolete." I am inclined to think that its main action is as a laxative or purgative, and this view is evidently shared by Dr. C.

D. F. Phillips, who, in his well-known work on the *Vegetable Kingdom*, states that in large doses it produces "dryness in the mouth, burning in the throat, a sensation of heat in the stomach, loss of appetite, heartburn, flatulence, nausea, vomiting and purging." My attention was drawn to the subject some two years ago by casually prescribing for a city man suffering from rheumatism some guaiacum lozenges made up with black currant paste. He continued taking them long after the pains had ceased, and his explanation was that they did him good by acting on the liver and bowels. He said that one or two of the lozenges taken in the morning before breakfast acted promptly and without inconvenience. I ordered the lozenges for other of my patients suffering from constipation, and what is conventionally called "biliousness," and the result was equally satisfactory. The lozenges not being available for hospital use I had a confection prepared containing ten grains of guaiac resin to a drachm of honey. This was curiously popular with the patients, and for the last two years I have used it extensively not only as a purgative but in the treatment of chronic rheumatism, sciatica, tonsillitis, dysmenorrhœa and allied affections. The confection is nasty, but is appreciated by patients. At first I gave it in drachm doses once a day, but they were not satisfied with this and I had to increase the dose to two drachms three times a day. In this quantity it seems capable of producing the maximum of inconvenience and discomfort, and gives unlimited satisfaction. The purgative effect is very pronounced, and in one case the patient had fifty-six evacuations in the week. In another case it produced a well-marked rash, covering the arms and legs with an eruption which forcibly reminded one of copaiba. That this rash is rare may be gathered from the fact that my colleague, Dr. C. T. Fox, had seen only one similar instance. It was accompanied by intense itching which disappeared on discontinuing the drug. The guaiacum not infrequently gives rise to a burning sensation in the throat, and to obviate this I prescribed the ten grains of the resin in half an ounce of extract of malt, which answered admirably. This method of treatment is, perhaps, simply a return to the old-fashioned "Chelsea Pensioner," which consisted of guaiacum, rhubarb, ginger, sulphur and certain other ingredients, but it is interesting nevertheless. I am sure that a trial of the guaiacum resin as a laxative or purgative, according to the dose employed, will be found satisfactory. It is possible that if the drug were triturated with cream of tartar, sugar of milk, or some other equally inert substance, its efficacy would be increased, and it would produce the desired effect in smaller doses.

Death from Injection into the Lung.

Dr. Robert T. French, of Rochester, N. Y., reports in the *Medical News*, Nov. 29, 1890, the following mishap, occurring in the treatment of phthisis by intra-pulmonary injection, is interesting. During part of the writer's term of service as house physician of the Buffalo General Hospital in 1888–89, a large number of cases of phthisis were treated by intra-pulmonary injections. The medicament used was a three-per-cent. solution of beechwood creasote in oil of sweet almonds. Of this about ten minims were injected at a time into a cavity or solidified apex. In most instances the immediate effects were very encouraging. The expectoration usually decreased, and the temperature, after the slight rise caused by the operation, fell, and continued for a time nearly normal. More than fifty such injections had been made with favorable results, when the following accident occurred.

The patient was well nourished, and under tonic treatment, and the disease seemed to be in abeyance. Three injections had been made, at intervals of four days, into the left apex, followed in each instance by decreased expectoration and marked diminution of evening temperature. The fourth injection was made by the usual method into the right apex, and the patient immediately after the procedure resumed his duties about the ward. Twenty minutes later he was seized with violent dyspnœa, which gradually became worse. He had formerly suffered from asthma, and the present attack resembled an asthmatic paroxysm. The irritation caused by the drug on the peripheral endings of the vagus seemed to afford a plausible explanation in support of this diagnosis. The usual remedies for asthma were administered, but all failed to give relief. Auscultation was rendered impossible by the violent tossing and groaning of the sufferer. About an hour and a half after the injection the patient died.

At the autopsy the right lung was found entirely collapsed and the pleural cavity

filled with air. The needle in entering the lung had passed through tissue as thin as ordinary writing-paper into an emphysematous space, communicating with a small cavity, which in turn communicated with a bronchus. After the puncture the thinness of the wall prevented it from retracting sufficiently to act as a valve, and the inspired air must have passed almost directly into the pleural cavity.

Cases of pneumo-thorax have been reported, following intra-pulmonary injection; but all were slight, and ended in recovery. Only one death immediately following this treatment is recorded, and in that case death was due to acute suppurative bronchitis. Had the pneumo-thorax been diagnosed in Dr. French's case at the outset of the attack he thinks it is possible that surgical interference might have saved the patient. The condition, however, was wholly unexpected, and was not recognized by any of the physicians who examined the case.

The slight benefits following this method of treatment are, in Dr. French's opinion, secured at too great a risk to make the procedure advisable.

Hypodermic Use of Strychnia.

Dr. Harold N. Moyer, of Chicago, in a paper read before the Southern Surgical and Gynecological Association, at Atlanta, claimed that the irritating properties of Fowler's solution, when injected into the cellular tissue, were largely due to the presence of free arsenious acid. This objection to the hypodermic use of the drug had been obviated by employing a solution of the arseniate of sodium, a stable, neutral salt of definite composition. This salt could, he found, be injected beneath the skin without causing more irritation than would be produced by so much water. He confirmed Hammond's conclusions that arsenic was less poisonous when given by the hypodermic method than when employed by the mouth. He had had a similar experience, in administration of the drug by the mouth, to the utmost limit of toleration, until the eyes were reddened and the stomach disturbed. Then the use of the drug by the mouth was suspended, and an increased dose given hypodermically, with complete subsidence of the poisonous symptoms. The toxic properties of arsenic are largely focused upon the stomach, liver and upper end of the small intestine. If we administer arsenic by the cellular tissue it immediately enters the general circulation and so avoids the selective action that the liver undoubtedly possesses for metallic salts. An analogous example was to be found in the use of mercuric salts, by inunction and injection.—*Weekly Medical Review*, December 6, 1890.

Tannic Acid as an Intestinal Antiseptic Remedy.

Professor Cantani has written, in the *Wiener medizinische Blätter*, of his therapeutical trials of tannic acid in intestinal diseases. He has found it, in ⅓, ½, or even in 1-per cent. solutions, acting a useful part as an antiseptic, as it hinders the vegetative activity of the microbes and renders innocuous many of the poisonous ptomaines. In diarrhœa and dysentery, therefore, tannic acid becomes an important disinfectant as well as astringent remedy. Mosler also reports that this drug is very beneficial in typhoid fever, particularly for removing the symptoms of meteorism and diarrhœa. Antiseptic solutions are best introduced by enteroclysis [injections into the colon], the fluid thus administered having been proved, by the subsequent vomiting of some of it, to reach not only the whole length of the intestines, but even to the stomach.—*New York Medical Journal*, December 6, 1890.

NEWS.

—Dr. W. H. Elliot, of Houston, Texas, died December 23, 1890.

—Prof. Hyrtl, the Austrian anatomist, celebrated his eightieth birthday recently

—Dr. C. H. Hall, of Boston, was arrested for alleged malpractice December 29, 1890.

—The new St. Christopher's Hospital, in Philadelphia, was opened December 29, 1890.

—Dr. George P. Wesselhœft, a well-known physician of Brookline, Mass., died December 29, 1890.

—H. A. Kelso, of Paxton, Ill., was assaulted and robbed in Chicago, on December 19, 1890. His skull was fractured.

—Dr. A. F. Holt, Surgeon-General of Massachusetts, died in Florida, December 28, 1890. He was fifty-two years old.

—Dr. John B. Hayes, a well-known physician of New York, was attacked by a highwayman, while walking through Union Square, early New Year's morning.

—A death under ether anæsthesia occurred in the St. Barnabas Hospital, Minneapolis, December 25, 1890. The patient was a well-built young man, with a tumor of the foot.

—Dr. Nathaniel R. Boutille, of Coatesville, Me., died December 22, 1890, of paralysis. He was almost seventy years old, and was a highly-esteemed citizen and practitioner.

—The American Chemical Society, at its concluding session in Philadelphia, December 30, took steps towards uniting with other bodies of chemists in the formation of a national organization.

—Dr. Theron Temple, of Waltham, Mass., died December 28, 1890, at the age of 57, after a long sickness. He had been city physician of Waltham and for several years in the Boston Custom House.

—Dr. Nicholas Senn in December resigned his Professorship of Surgery at the Rush Medical College, Chicago. The reason assigned is the refusal of Prof. Parker to permit Prof. Senn to deliver clinical lectures at the college.

—It is reported that physicians have been sent by the Russian government to Asia Minor to test by experiment the treatment of cholera with the ferubia sumbul, a plant growing in Turkestan and possessing antispasmodic properties.

—Dr Samuel G. Dixon, the bacteriologist of the American Academy of Natural Sciences, returned December 29, 1890, from Berlin, where he had been studying the merits of the Koch lymph on behalf of the Jefferson Medical College.

— Mr. John Ogden has associated with him Mr. W. S. Harvey as a partner in the drug business, conducted at Walnut and 13th streets and Arch and 19th streets, Philadelphia. Both stores will be conducted under the firm name of John Ogden & Co.

—A dispensary for the treatment of the diseases of women amenable to electricity has been opened at 1632 Cherry St., Philadelphia, under the charge of Dr. G. Betton Massey and Dr. Horatio R. Bigelow. Physicians are invited to bring or to send suitable cases on Mondays, Wednesdays or Fridays at 3 P. M.

—Dr. Edgar M. Green, of Easton, Pa., who was recently engaged to make certain chemical and microscopical investigations for the Court at that place, presented a bill for $200 for his services. The County Commissioners refused to pay the bill, but agreed to abide by an arbitration. The arbiters decided in favor of Dr. Green and said the bill was reasonable.

—The advent of the new year in Norristown was marked by the formal opening of the borough's first charity, Charity Hospital, which was then turned over to the public for its first inspection. It is claimed by the directors of the concern that it has more cubic inches of space per bed than any other charity hospital in the State.

—The new building of the Polyclinic Hospital, on Lombard street, above Eighteenth, Philadelphia, was opened for the reception of patients December 29, 1890. All the clinics were opened in the morning with their apparatus in full working order. The wards are not yet ready for the reception of patients, but are expected to be ready in about a week.

—According to the Bureau of Vital Statistics the health of New York, in 1890, was better than in 1889, as the death-rate was 24.66 per 1,000, against 25 last year. This calculation, however, is based on an estimated population of 1,631,232. There were 40,230 deaths in the city during 1890, or an average of one in every 13 minutes during the year. In 1889 the deaths were 39,583. There were 39,250 births and 14,992 marriages. Over one-fourth of all the deaths were of children under 1 year old. Phthisis and pneumonia were the chief causes of death, they being responsible for 10,418 of the deaths. There were only two fatal cases of small-pox.

OBITUARY.

L. M. HUBER, M. D.

Dr. Lee Huber died in Rocky Ford, Col., December 18, 1890. He was born in 1853 in Lancaster Co., Pa., and was graduated in 1877 from the Millersville State Normal School, of his native State. Some time after that he received a degree from Lafayette College. In the fall of 1882, he entered Jefferson Medical College, of Philadelphia, and in 1884 was graduated from that College, taking the first prize in obstetrics. He then located and entered into a promising practice in Chicago, but his health failing him, he moved to the far West, where his life was terminated by consumption.

He was a contributor to the MEDICAL AND SURGICAL REPORTER, whose papers were always interesting and instructive.

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Clinical Lecture.

TREPHINING FOR EPILEPSY.—FRACTURE OF THE BONES OF THE ANKLE. — SURGICAL TREATMENT OF PSOAS ABSCESS.

BY JOHN H. PACKARD, M. D.,

SURGEON TO THE PENNSYLVANIA HOSPITAL.

Gentlemen: The man who presents himself to our attention to-day has no especial family history bearing on his case; there is no history of nervous trouble in his family except that one uncle was an epileptic. Our patient was a healthy boy until he reached the age of fifteen, when, on returning from school one day, he was hit in the head with a brick. He became unconscious and was carried home in that condition. He retained apparent health for a year, until when sixteen; then while swimming he was suddenly seized with a queer feeling and became again unconscious. He then went six years without the recurrence of any similar symptoms. Then he had a number of repeated spells of unconsciousness, in one of which he fell and broke his arm. In 1858 he went to China, where he contracted gonorrhœa and in addition a chancre. He is a moderate drinker; his only other history is that of rheumatism. Now his attacks come on irregularly but with great frequency. He thinks that the heat of summer makes them appear at more frequent intervals; so that now he is in constant dread lest one may appear at any time. He is nervous and debilitated. When the attack comes on there is loss of memory first, then a convulsion appears in which there is total loss of consciousness; before coming to, he walks for squares without consciousness appearing; finally coming to his senses he finds himself far from the spot where the attack commenced. On going home, he finds that his muscles are excessively sore and weak as if they had been subjected to a severe pounding. On careful examination there has been found no disease in any of his organs; no albumin in his urine.

In a number of features this case differs from the history of a case of epilepsy as we ordinarily hear it. In most cases these convulsions and spells of unconsciousness come on without apparent cause. It is often a common experience to find children presented with the history of protracted spells of violent outbreaks of temper and terrific screaming spells; in these occasionally it has been noticed that they have fallen and examination discloses the fact that in the fall the tongue has been bitten. Again, ordinarily after an epileptic seizure, it is customary for the patient to fall into a heavy sleep, dull and stupid in its character, from which he awakes unrefreshed. It is not uncommon for an epileptic to run as the attack is coming on, although in many cases this may be limited to taking a few steps. I remember a patient that always ran for a stairway when his attacks came on; it is a remarkable fact that in these runnings he never pitched himself down-stairs to destruction. In some cases a preliminary cry is heard; it frequently occurs in a case of epilepsy that at first the cry is heard, but that as time goes on, that it gradually disappears, and finally ceases to occur altogether.

This man, from the nature of his malady, is incapacitated for work; he could not keep a position as clerk anywhere, for he is constantly exposed to these attacks and it would be most awkward indeed for himself and his employer to have them occurring in business hours, for they would seriously interfere with the quantity and quality of his work.

On careful consideration of the features

of the case I have determined to trephine him over the seat of his former injury, which is in the parietal region above the zygoma. At the point which he indicates as the place of injury from the brick, is a slight scar in the scalp and a depression in the skull. It is probable that his present malady comes from the blow, although the spells of unconsciousness did not appear in very close connection as regards time; still the connection between the cause and results is sufficiently reasonable for our purpose.

I have no idea as to the condition which we shall find within the skull. The internal table may be turned in, causing compression of brain substance. There may be simple adhesion between the inner surface of the bone and the dura and pia mater. There may be thickening of the brain substance at this point. We will be prepared for anything. Now as to the amount of risk run by the patient. The objection has been raised that in the necessary use of ether the epileptiform condition is liable to be produced; this need not influence us in any way; this condition in the epileptic under the circumstances is in no wise different from that induced in a normal subject. You will see that this epileptiform condition which usually appears in patients only after prolonged etherization, has appeared in this man almost immediately on his taking the first inhalations. It need not alarm us; we will treat it as in any other case, simply withdrawing the ether until the disappearance of the unpleasant symptoms. As he is now recovered from this condition we will make our first incision. In cutting the flap of skin covering the affected point, I do it in such a way as to allow the best drainage subsequently, as the patient's head reclines upon the pillow in bed. Hence the convexity of the curve is downwards. After I have taken out the plate of bone, I will use this platinum probe, which is bent at the end in such a way as to allow its insertion under the skull around the edges of the hole, to determine the condition of the inner surface of the cranial vault. If any spicula of bone is pressing down, this probe will detect it. Curious as it may seem, it is a fact that, although the operation of trephining has been known and practiced for a long time, it was not until the present century that the idea of cutting a semicircular incision in the scalp was published. Before this time it was the custom to remove the flap of skin entirely in performing the operation. Hay, in 1803, published the first suggestion of this idea; it may have been practiced before; if so, we have no record of it. Hay proposed a cruciform or semicircular flap.

The danger which we run from hemorrhage is as follows. In this region are found the terminal branches from the external carotid artery above the zygoma in the parietal region. These will not cause us much trouble; hemostats will control them if they chance to bleed too freely. On the inner table we have the branches of the middle meningeal artery; you have frequently noticed in your examinations of the inner table of the skull the grooves which branch here and there across its surface; in these grooves run the branches of this middle meningeal artery, on the outer surface of the dura mater. Sometimes these little arteries bleed furiously when cut. To stop this hemorrhage we will use if necessary a small pair of forceps, placing one blade within the skull and one without, compressing in this way the lumen of the artery. In applying the trephine we must not be too liberal in its use; the skull is rather thin at this point, hence we could easily go in too far. On removing this plate of bone I find that the probe passes freely around under the skull, showing that apparently there is no projection of bone and no adhesion as far as I can determine. The probe makes an uninterrupted passage around the entire opening. I have bitten away the edges of the opening to allow more extended opportunity for examination, all to no purpose. The dura mater bulges, as it should, into the opening; but it may require a puncture subsequently to relieve the pressure; the brain symptoms will reveal this necessity if it exists. At the temporo-parietal fissure the dura should be adherent. The temporal fossa is easily reached from this point; and if care and thought are not expended, it may be that fragments of normal bone will be removed.

I feel satisfied that the simple depression of the skull is sufficient to explain the occurrence of all the symptoms shown in this case. I am sorry for the sake of a brilliant demonstration, that I could not have removed a spicule of bone and have been able to say that it was the disturbing factor, but I have found enough for the present, and I see no reason for further interference, beyond biting away a little more of the edge of the hole. For a dressing we shall use iodoform gauze, placing it in contact with the dura mater, and not filling it in too close

for twenty-four hours, covering this with an antiseptic dressing. If no symptoms arise I may leave this dressing for forty-eight hours. There is a little troublesome hemorrhage from the edge of the wound; I will place a hair-lip pin around the vessel and throw a ligature around it. We also put in a catgut drain to assist in the free escape of liquids.

What good have we done? Often it is hard to see what the improvement of the symptoms is due to; here a depression has been removed. This depression may cause congestion of the membranes of the brain, repeated at frequent intervals and slowly growing more severe and prolonged.

Fracture of Ankle.

The next man has trouble at the other end of the body. He presents a history which is not uncommon. Eight days ago he was admitted to the hospital suffering from the effects of a fall from the second story of a building. He alighted on his heels; the skin over one ankle was broken and there was free bleeding. Several bones—it is difficult to say exactly which ones—were fractured. The same condition existed in the other foot, except that that was no solution of the continuity of the skin. The question immediately arises on seeing a case of this sort, of what should be done. It is not best, I believe, to attempt to make accurate apposition of the fractured bones; this would require dissection of the parts and would do more harm than good. It is better to make moderate extension and reduce all apparent deformity in the ankles. There will be undoubtedly some subsequent stiffening. In this case we have simply applied lead-water and laudanum dressing, to subdue the inflammation; after the swelling has subsided sufficiently, readjustment of the displacement will be made as carefully as possible. I had a case some time ago which reverts to my mind. A gentleman leaped from the window during the excitement of a hotel fire, landing on his feet. There was such severe contusion that I etherized the man, but found no fracture. Eventually he recovered but with inability to bend the foot in and out. He was an amateur organist of considerable ability; unfortunately he found that this was the exact movements required for the pedals. It was a great disappointment but he will gradually recover the movement in the course of time.

Psoas Abscess.

The next case is one of psoas abscess; the man who lies before you has one such abscess; but a sudden rise of temperature and the appearance of symptoms of severe sickness was followed by the discovery of a swelling on the other side, which on opening under ether revealed the existence of pus. I am going to present the case to my colleagues and if they assent I will follow the route of these abscesses back to the carious vertebræ which they represent and if possible will remove all the carious material. I have seen these cases, fifty at least in the past twenty-eight years, present themselves with this man's history and all go on to the same termination. At other points of the body we remove carious bone; we take it out of the fibula or femur; if it can be taken from the vertebræ it would be most excellent. The operation is not so radical and difficult or serious to life as you would imagine at first thought. The route has been made for us; all that we would have to do would be to follow it.

COMMUNICATIONS.

ERGOT IN TYPHOID FEVER.[1]

BY T. B. HILL, M. D.,
RUFF'S CREEK, PA.

Ergot stimulates the unstriped or involuntary muscular fibre to contraction wherever found. Such fibre is found in the alimentary canal from the middle of the œsophagus to the internal sphincter ani, in the posterior segment of the trachea and the bronchial tubes to their finest ramifications, in the heart, in the middle coat of the arteries, veins and lymphatic vessels and in other situations.

In the treatment of typhoid fever, prior to the advent of the so-called specific methods, the proper thing to do, seemed to be to mitigate the more prominent and unpleasant symptoms, and to guard the avenues of danger. Moreover, however meritorious in themselves, the newer ideas have not usurped and cannot usurp the place of the old. We are not cognizant of the disease apart from its symptoms—headache, fever, diarrhœa,

[1] Read before the Tri-County Medical Society at Washington, Pa., October 15, 1890.

depression, abdominal pains, tympanites and intestinal hemorrhage. Then we have the specific lesions—enlargement of the mesenteric glands, with deposit in the glands of Peyer, which usually advance to ulceration. One of the earliest and most persistent symptoms is feebleness. Not only is the gait staggering and uncertain, but there is also relaxation and want of tone in the muscles of the entire economy. A marked example is the softness of the pulse and the feebleness of the first sound of the heart. Relaxation of the smaller blood-vessels is common, as shown by the numerous mucous congestions. Epistaxis is a common, and diarrhœa an almost universal early symptom.

From a careful study of the pharmacology of ergot, I was led some years ago to believe that in it we have a drug capable of meeting more of the indications presented in typhoid fever than can be met by any other single drug or combination of drugs at our command. At the same time it is extremely simple and entirely harmless.

The symptom which earliest and most loudly calls for treatment is headache. I am aware that there has been some difference of opinion as to the pathological condition on which the headache depends, but the preponderance of evidence is in favor of congestion. The value of ergot in congestion of the central nervous system is well established, hence its indication here.

The condition of the circulation is another circumstance which, though not so self-asserting as the headache, is of far greater importance and ought to receive much earlier attention than is generally accorded to it.

Prof. Pepper in a clinical lecture says: "Among the indications to be considered in the prognosis, I have mentioned the heart and the pulse. This is exceedingly important. I think that the study of the sounds of the heart—of the strength of the muscular or first sound of the heart, the strength of the impulse, the way in which the artery fills at the wrist, how it resists pressure, the quality of the beat, the frequency of it and its regularity—is of the first importance in the prognosis of typhoid fever; and as a guide to treatment, especially in regard to the important question as to the administration of stimulants. In a case in which the pulse-rate is from 120 to 140 per minute, very compressible so that it collapses under the slightest pressure, with an exceedingly weak first sound, so that it assumes an almost valvular character, stimulants may be given freely." I have given this quotation to emphasize the importance of giving earlier attention to the condition of the circulation. If it is of the *first importance*, as Prof. Pepper says, why should we withhold the hand until we are confronted by the critical condition he describes? Simply, I presume, because no one is willing at an earlier period to resort to stimulants (by which is meant some of the forms of alcohol), because they are not capable of accomplishing the desired good, and because they may accomplish undesired evil. They cannot accomplish the desired good because their force is directed to the nervous system, which at this early period is not at fault. They may accomplish undesired evil, because the stage of depression which follows overstimulation may overtake the patient at a time when his vital powers are not able to withstand it. In ergot, on the other hand, we have an agent which, by directing its energies to the weakened muscular structures, causes the heart to contract with more firmness and regularity, while to the arteries is restored that resiliency which enables them to carry forward the circulating fluid with healthful vigor; and a condition of self-confidence is imparted to the entire circulation.

Diarrhœa is a symptom which is present in a large part of all cases of typhoid fever, and usually at one stage or another calls for some kind of treatment. The use of ergot in diarrhœa and dysentery is not a new thing. The indication is as well marked here as in any other form of diarrhœa.

Intestinal hemorrhage is a symptom which I believe is always dreaded. Almost everybody prescribes ergot when hemorrhage has actually taken place. I hold that it would be better practice to fortify, not only against intestinal hemorrhage, but also against all forms of hemorrhage by an early resort to the use of ergot.

With the causation of typhoid fever the present discussion has nothing to do. But whether it be due to a specific microbe or not, the special lesion is hyperemia of the intestinal mucous membrane with foci of inflammation in the glands of Peyer. Here the indication is to remove the hyperemia and to starve out the inflammation. If there is a drug in the materia medica available for this purpose, it is ergot.

Tympanites is often a serious trouble, and

sometimes goes so far as to constitute an important element in the prognosis. By its upward pressure it causes marked interference with respiration, and adds greatly to any pulmonary complication. In the same way it hinders the free action of the heart. It is caused by fermentation of the ingesta, and is made possible only by the relaxed state of the muscular layer of the intestinal wall. Stimulate these muscles to maintain the caliber of the intestine at its normal dimensions, and tympanites can no more occur in the typhoid patient than it can in an individual enjoying perfect health. This looks like a strong statement; but it is not inadvertently made.

Perforation may be very appropriately spoken of as the "king of terrors" in typhoid fever. I do not say that it can be entirely prevented. I know there are cases, apparently the mildest, not seeming to call for any medication whatever, which, without any premonition of danger, suddenly develop the intense abdominal pain, the chill, the collapse, that only too unmistakably tell the sad story of a perforation. But I do say that when we permit the inflammation in the intestinal glands to run its course unimpeded to final ulceration, and when we permit the intestine to be distended to its fullest extent—the ulcers stretched to many times their original size, the thickness of the wall at their bottoms diminished to the most extreme tenuity, while the volume of pent-up gases, continually reinforced by the putrefactive processes, momentarily threatens to burst through the fragile structure and sound the knell of the unfortunate victim—then, I say, we have done what we could to render the untoward event not only possible but probable. If, however, we have, as already intimated, made use of means to remove the hyperemia and to starve out the inflammation—if we have limited the size of the ulcers, while we have preserved the normal dimensions of the gut and the tonicity of its walls, compelling the generated gases to move on instead of accumulating in such proportions as to be an ever-present menace to the life of the patient, we will have reduced the danger of perforation to the minimum. Again the indication points to ergot.

Now, having shown that ergot is indicated for headache, for the circulation, for diarrhœa, for the intestinal lesions, for tympanitis, for hemorrhage, and as a safeguard against the almost certainly fatal perforation, it remains to ask: Is ergot capable of fulfilling these indications? My experience is yet so limited—and that is my only source of information—that I say it with timidity, but I feel able to answer: It is. The apparent results have been so uniformly and almost universally gratifying, that I am glad to believe this is not a mere coincidence. My cases may not have been the worst; but I have not lacked bad cases. In one instance the thermometer marked 106° for six consecutive days. Not only has the ergot had a salutary effect on the headache, but it has seemed to ward off delirium and other nervous manifestations which are apt to appear later in the attack. In the case already referred to, in which the temperature was 106° for six days, there were absolutely no nervous symptoms, and no other bad symptoms but the temperature.

In order to anticipate adverse criticism, I may say that I am not in sympathy with the antipyretic treatment, as a prominent factor in the management of typhoid fever.

Under the ergot treatment I have never seen more than the mildest delirium. I have seen very little somnolence, and no coma-vigil. I do not remember having prescribed anything else for diarrhœa, but have frequently prescribed for the opposite condition. I have never seen a case of intestinal hemorrhage. I have not seen tympanites beyond the slightest degree of fulness. I have seen only one case in which, as I now think, it was necessary to resort to alcoholic stimulation to sustain the flagging energies of the heart. This was the case of a woman in whom the menses came on in the second week of the disease and lasted one week; during which the ergot was suspended, and after which it seemed to have lost its usefulness. In this case there was decided failure of the heart which demanded the use of alcohol. I have seen no case of perforation. It goes without saying, I have seen no fatal case.

It would seem superfluous to enter into any detail of the manner of using ergot, so simple is it, yet this brief resumé might appear incomplete without some reference to that part of the subject. I have used only the fluid extract, in doses ranging from twenty to thirty minims every four, six or eight hours, as the case might require. Since beginning the use of ergot, all of my cases—about thirty—have been treated in this way from the commencement until convalescence was established, except the one case mentioned.

There is of course nothing specific in this treatment; nor is it intended to supplant specific medication, in which I believe, and which I practice in combination with ergot. All that is claimed for it, is that it is the simplest, safest, most rational and most efficient symptomatic treatment conceivable. As such I respectfully submit it to the consideration of the members of this society, with the hope that some, at least, may think well enough of it to give it a trial.

AN ANOMALOUS CASE OF MEASLES.

BY J. C. WILSON, M. D.

The following case illustrates two points of importance in regard to the acute infectious diseases:

1. Variation from the ordinary type; 2. The difficulty of diagnosis in atypical cases.

Case.—Atypical measles; sudden onset; absence of coryza; erythematous sore throat; scarlatiniform eruption.

G. L. J., sixteen years old, a school boy, had suffered from rötheln some years ago. He had never had measles or scarlet fever, and was peculiarly liable to attacks of sore throat. He had mild enteric fever in September, 1890; made a good recovery, and was in his usual health.

November 27, upon rising, he felt chilly. The chilliness and shivering continued throughout the day. Towards evening his throat became sore. There was no sneezing, no coryza, and no cough.

November 28. The boy was feverish and indisposed, and had what he describes as a severe attack of indigestion, but without vomiting. He had no appetite, a good deal of pain on swallowing, and pains in back and joints. His evening temperature was 102° F.

November 29. He had a brilliant erythematous inflammation of the soft palate, uvula, half arches and tonsils. His tongue was thickly coated with yellowish white fur, and his bowels were constipated. His urine was non-albuminous. He complained of throbbing headache and backache; the pains in the joints had disappeared. His face was slightly flushed but free from eruption; his eyes were suffused. but not intolerant of light. There was still no sneezing; no cough; no râles.. Upon examination, the neck, thorax and sides of the abdomen were seen to be covered with a diffuse erythematous exanthem, resembling that of scarlet fever. The back and extremities were free from rash. The pulse was 112; the temperature 100° F. The evening temperature was 102.4° F. The boy was now given hydrag. chlorid. mitis, gr. v; pulv. morph. comp. (Tully's powder) gr. ii, every two hours.

November 30. The throat was less painful, but still deeply red; there was no eruption over the mucous membrane covering the hard palate. The diffuse scarlatiniform eruption had extended over the face, trunk, upper extremities and lower extremities as far as the knees. Upon the legs and arms it was most conspicuous upon the extensor surfaces, but it also covered the flexor surfaces. When viewed at a short distance it preserved its uniform appearance. Upon closer examination it seemed to be punctiform, and the hair follicles were seen to be especially swollen and congested. The texture of the patient's skin was rather coarse. There was also on this day some irritative cough; but upon auscultation no râles were discovered. The morning temperature was 102.4° F.; the evening temperature was 103.4° F. The use of calomel was followed by two large movements of the bowels.

The patient was now given

℞ Chloral. hydrat., ... gr. iii
Syr. lactucarii (Aubergier's) . . . . ♏ xv
Aquæ . . . . . ♏ xlv

every two hours.

December 1. The throat was much better, and the cough no longer troublesome. Upon the face, chest and extensor surface of the extremities, the rash preserved its former appearance; on the flexor surface of the fore-arms, the diffuse rash had disappeared, leaving the dull, red, occasionally discreet, flat, papular eruption of measles, with characteristic curvilinear and crescentic arrangement. The exanthem of measles showed itself on this day upon the legs below the knee. The morning and evening temperature was 101.4° F.

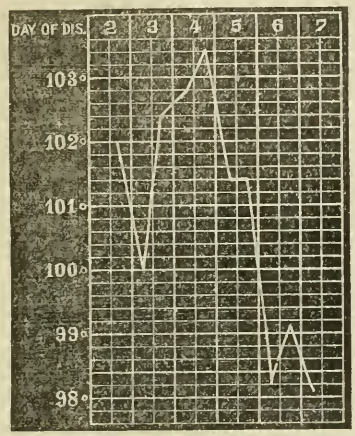
December 2. The morning temperature was normal; the throat was well; the exanthem was everywhere rapidly fading.

December 6. Convalescence was fully established; and there was a fine, scaly desquamation of face and neck; the temperature was normal, the urine not albuminous.

December 12. A brother of the patient,

eleven years old, who had been sent to the house of a relative, was brought to me on account of a troublesome irritative cough and sneezing, which had lasted two days. The following day he developed the eruption of measles.

This case, trivial as it appears when thus set forth, is not without practical interest. During the first three days a correct diagnosis was practically impossible. It was only upon the fourth day, when the fading erythema brought into relief the exanthem of



measles on the flexor surfaces of the forearm, and when the same eruption appeared upon the legs below the knees, that a doubt arose. The subsequent history of the case renders the diagnosis of measles alone tenable. The abrupt onset, with shivering and erythematous sore throat; the site of the appearances of the rash and the mode of its distribution; the absence of coryza; the insignificant catarrhal symptoms; and the temperature range, taken altogether, constitute in this case a wide variation from measles in its ordinary form.

The practical bearing of such a departure from type in any of the exanthematous diseases especially occurring in private practice requires no comment.

Women Pharmacists. — It is said that there are now four women students of pharmacy in Philadelphia, and already, before they are near their graduation, three positions are waiting for them. Rather different this from the mob of poor sewers ever besieging the gates of that kind of employment—gates at which only one may be admitted for ten left outside.

WHEN IS TOTAL HYSTERECTOMY INDICATED? A PLEA FOR CONSERVATISM.[1]

BY F. SHIMONEK, M. D.,

MILWAUKEE, WIS.

In looking over the literature of hysterectomy for carcinoma of the cervix, my mind became imbued with the idea that the very wide differences in the views of authors regarding the propriety of total or partial extirpation, depended upon certain positive pathological elements and required extra vigilance in order to arrive at a correct opinion in regard to this important subject. I therefore desire to read this short paper regarding some points as means of differentiating the malignant neoplastic proliferations affecting the cervix uteri, as bearing on the selection of the proper operation. The kind of histological elements found in the new growth, to my mind, should influence the selection of the proper surgical procedure.

Since I have arrived at this conclusion, I saw in the *Medical Record*, September 6, 1890, an opinion expressed by Dr. John Williams, that "in cases of cancer of the cervix and of the portio vaginalis the propriety of operation depends upon the pathological variety of the neoplasm, etc." Therefore, I claim that no man has the right to perform total hysterectomy without having satisfied himself beyond all doubt that he is dealing with a neoplasm whose great tendency is early to infiltrate the body of the uterus. Of course, this has reference to the early stage, for in advanced cancerous degeneration, whether it be cancroid or carcinoma, only one thing is proper, if any, and that is total extirpation. There are chiefly the two varieties—squamous-celled carcinoma or epithelioma, and the spheroidal-celled carcinoma, or the glandular or true cancer, which frequently affects the cervix. The epithelioma is the most frequent, and ordinarily it is primarily a superficial lesion, which, as the growth advances, gradually involves, as a rule, the surrounding tissue and only towards the end in some cases, infiltrates the body of the uterus, though only very exceptionally,

[1] Read before the Milwaukee Clinical Society, October, 1890.

as the great tendency is to destroy more and more of the infiltrated tissue rather than the establishment of numerous and remote foci of infection.

It is an undoubted fact that the epithelioma is not so malignant and is better amenable to the knife than the glandular cancer. Now, I think that the contradictory opinions, regarding the selection of the most proper procedure, completely ignore this undoubted and important factor in the diagnosis early in the invasion of the neoplasm. Such has been the success of some of the operators who prefer the partial operation, notably Baker and Byrne, that they report the average length of life, I think, to be about eight years. Byrne reports the cases of two women, who, after the operation, conceived and not only carried the children to full term, but gave birth to them without any special difficulty. If the teachings of some celebrated men had been followed, those women would have been consigned to barrenness. We must not forget, that, "In all gynecological operations the ultimate aim must be the preservation of the sexual activity." Therefore, it is the duty of every one who does work of this kind to investigate the exact pathological nature of the infiltration early, and not simply to make a diagnosis of cancer, and there let it rest.

There is no doubt but that the partial operation is comparatively simple, whereas complete hysterectomy is liable to be a formidable procedure, and the difference in the fatality of the operations is greatly in favor of the partial one. The glandular carcinoma commences deeper in the tissue and has a greater disposition to infiltrate the corpus uteri early; the greater malignancy of this variety is too well known to require an extensive argument in its support, and its tendency to recur is consequently also very much greater. Therefore, I contend that, it is of prime importance to make a most thorough histological research as early as possible in the invasion of the new formation, and for that purpose it is not generally sufficient to secure, merely, some scrapings or excise small pieces, but one must remove large wedge-shaped pieces or the whole intra-vaginal portion, if necessary, in order to make a comprehensive investigation; because one cannot judge of the condition of the whole by examining a small fragment thereof.

My argument is, then, if careful microscopic examination shows a squamous-celled growth confined to the cervix uteri, one should perform supra-vaginal amputation; but if there be present a spheroidal-celled arrangement—be the neoplasm of ever so small dimensions—the probability is that there are widely scattered foci throughout the uterine parenchyma; and then total extirpation is most certainly the proper method. My own experience in this matter is very limited, but from a careful perusal of this subject I determined to make it the subject of these few remarks.

It may be appropriate in this connection to present the report of a case of malignant uterine neoplasm, with microscopic illustrations, which in a measure bears on the necessity for careful and thorough investigation for diagnostic and prognostic purposes. The case very positively proves that it is not sufficient to examine only a few scrapings. The specimens which I shall take the pleasure to exhibit to you, were made from a uterus which was wholly extirpated for an extensive malignant degeneration of the cervix uteri, supposed to be confined to that locality; but the microscope has since shown cells in their embryonic state, the so-called indifferent tissue or the pre-cancerous state, extensively distributed throughout the whole organ; and I have no doubt but that there were cells in the lymphatics and lymphatic glands in the pelvis. The only symptom of which the patient complained, at the time of presenting herself, was hemorrahage during coitus, which led me to examine the patient, and to discover the real state of affairs.

The first slide, which I show, was taken from a squamous-celled cancer of the cervix, and it very beautifully shows the typical cells and cell-nests. The next slide, which shows a specimen from this case here reported, was made from the cervix uteri in the immediate vicinity of the internal os, and it positively demonstrates the pathological difference between this and the preceding one. This section shows the mature spheroidal-celled carcinoma. You will notice that the cells are small, as compared with the squamous cells, and round, containing a nucleus and granular matter, also quite a development of inter-cellular fibrous tissue. This alveolar arrangement inclosing masses of spheroidal cells is characteristic of true cancer and the consistency depends upon the amount of the fibrous framework. The next section, which was made also from

the cervix, but nearer the external os, shows a different construction, and it would lead a man astray if he were to prepare only one slide. It is more like small, round-celled sarcoma, and in fact it is so much like it, that from one section it would be impossible to call it anything else; but it is the precancerous or embryonic tissue, or, as Maier's researches seem to show, the transformation of a sarcoma into cancer. Klebs denominates these (somewhat rare) mixtures, *carcino-sarcomata.*

The next slide was prepared from a polypus-like growth, which was situated near the internal os in the cavum uteri, which, you will perceive, shows the same sarcomatous appearance. The last sections were taken from remote parts of the body of the uterus and mucous membrane, and, in addition to the muscular tissue, show on quite close inspection similar small-round cells, which I mistook, at my first examination, for a transverse section of some muscular fibers, but since they are scattered irregularly among bundles of uterine muscular fibers, and bear a very close resemblance to the primitive cells, I am forced to conclude that they are all neoplastic cells.

Judging from the maturity of the glandular cells and inter-cellular fibrous tissue found in the deep part of the cervix, from the great rarity of cervical sarcoma, from the wide but sparse diffusion of the embryonic elements, I conclude that this was a case of true cancer with extensive infiltration.

The operation was quite difficult on account of the great size of the cervix. The patient succumbed to shock in about twelve hours. She nearly perished on the table, but rallied again, then failed and died.

What I have said has been with the design of suggesting and urging further and more accurate microscopic work and of pointing out the distinctive features of these epithelial new formations and their relations to the malignancy and infiltrating tendencies, as bearing on the selection of the proper surgical measures.

—Iodine, free from chlorine, is obtained (*Pharm. Centralh.*) by placing commercial iodine in a beaker glass and covering with a concentrated solution of potassium iodide. Place over the vessel a plate of glass, and apply heat until the iodine is melted. After cooling, collect the iodine crystals on a filter, and wash with distilled water.

CASE OF PERITONITIS.[1]

BY R. J. TRIPPE, M. D.,
CHATTANOOGA, TENN.

On November 4, 1889, Ed. Stokes, 32 years old, a strong heavy-set negro, came to my office about 8 A. M., suffering excruciating pain in the abdomen, having received a blow with a crow-bar across this part of his body. Perspiration stood in large beads all over him. His radial pulse was imperceptible. He was not able to tell me anything about how he had been hurt. I administered a hypodermic of morphine, half a grain, and of atropine one-seventy-fifth of a grain, and gave him stimulants freely. In about an hour he felt very much better, and was placed in a hack and sent to his room, a distance of about eight blocks. I saw him later in the day, when he informed me he felt well enough to get up; but when an attempt was made, he discovered he was too weak. His appetite was good, and he was not thirsty. I told him to remain in bed until I saw him.

The next day, at 9 A. M., I saw him again. He now said he was feeling first-rate, and had taken food regularly and relished it. His tongue was heavily coated with brown, and was thick, broad and flabby. His breath was very offensive; he had no pain in the bowels, had passed urine without pain; and had no tympanites or tenderness, even on very deep pressure. I ordered calomel and soda āā gr. x, to be followed with sulphate of magnesia in a few hours.

On November 6, the third day, at about 3 P. M., without any warning, stercoraceous vomiting set in; but I did not see the man until 9 o'clock. His temperature was then 96°, his pulse 130, and he was wet all over with cold perspiration. I filled his stomach and bowels with hot water, with a view to overcoming the obstruction if possible. The water injected into the bowels came away as clear as it went in, but that in the stomach was accompanied by fecal matter. At 12 o'clock, as my patient got no better, I determined to wait no longer, and at 2 P. M. I opened the belly, and to my utter surprise found the entire cavity full of the most offensive pus I ever saw. (I may mention that even then there was not the slightest pain or tenderness of the bowels). The intes-

[1] Read before the Tri-State Medical Association, October 16, 1890.

tines were all adherent, and perforated in several places.

I realized at once that the case was a hopeless one, but proceeded with the operation as though I expected a good result. The perforations were closed with catgut; the adhesions were broken up and the guts separated; and the cavity was washed out with warm sublimate (1 to 20,000) until it returned perfectly clear. A drainage-tube was put in, and the wound was closed and dressed in the usual way. The patient was then put to bed, and packed with hot bottles. Reaction was prompt, and the temperature in three hours was normal. The man suffered no pain on the night after the operation, and had no nausea or vomiting.

On November 7, the fourth day, I saw him at 9 A. M. He then said he had had a good night, was hungry, and felt so very well that he declared he was going to get well. His bowels had begun to move, and the discharge had the appearance of bloody water mixed with pus. His diet consisted of milk and whiskey at regular intervals. His temperature was normal, his pulse 90.

On November 8, the fifth day, at 9 A. M., he was resting well, and said he had had a good night. He was still hungry. His temperature was normal, his pulse 78, his bowels still active. At 6 P. M. he was resting well, with a temperature of 99°, and a pulse of 90.

On November 9, the sixth day, at 10 A. M., his temperature was 98½°, his pulse 80. He said he thought he would be up in a few days. His bowels were still acting, and the movements of better character. I ordered the same diet to be continued.

About an hour later I was passing, and on inquiry I learned that my patient had suddenly grown worse. His temperature was 95°, his pulse 120, and at about 11 o'clock he died.

VALUE OF THE KOCH REAGENT FOR TUBERCULOSIS.

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In considering at present the therapeutic value of the Koch remedy for human tuberculosis, we must weigh its power for good against its power for evil.

In lupus affections the reagent certainly produces an active inflammation, which causes death of the recognizable tuberculosis tissue. During treatment of lupus, a nodular infiltration takes place. The œdema in many cases is exaggerated. As the fever subsides, prostration is often experienced, the nodules gradually become covered with a crust, under which can be detected a healthy looking granulation. When these crusts fall off, young, red cicatrices are to be seen. The cases soon present the appearance of a perfect cure. This condition, however, does not always remain. In after weeks the characteristic inflammation of lupus again appears, and the process goes on as before.

Query. Does the reagent destroy all tuberculous tissue or does it only destroy that which we recognize? Time must answer.

Owing to the suppuration set up by the action of the Koch remedy in the vascular tissues, immediately surrounding the tubercles, the remedy is positively contra-indicated in tubercular meningitis.

With all internal tuberculous affections there is more or less danger of disseminating the bacilli. If the remedy attacked the bacillus as it does recognizable tuberculous tissue there would not be that danger.

In surgical tuberculosis, where there is not a marked predisposition of the tissues, we have much reason to look for success. Such cases more closely resemble the experimental animal cases than those of other characters. In these we should have all the advantages of the remedy and fewer of the disadvantages than in most others. Here the reagent may produce a degree of active tubercular inflammation sufficient to cause the death of the tubercular tissue, yet not affect tissues which are not predisposed to tuberculosis.

Time may show that the Koch remedy does not injuriously affect any tissue other than that which we can recognize as tuberculous. However, at present, no one can say that the new manifestations of tubercular lesions only arise in tissues previously tuberculous. The dissemination of the bacilli by being taken up into the circulation may produce the tuberculous process in parts that would under no other circumstances have taken on the tubercular process.

I must call attention to the fact that the remedy causes an acute inflammation in all live tuberculous tissues. All the vascular tissue surrounding tubercles, when under the influence of the remedy, is loaded with small round cells. The wandering cells are

even found working themselves into the giant cells. Hyperemia is produced. Each tubercle becomes the centre of an inflammation in the lung. Therefore in proportion to the lesion, the alveoli in the periphery of the tubercle are rendered incapable of performing their duties. In very extensive dissemination of tuberculosis, the enormous decrease in the functionable lung parenchyma may prove disastrous to life. This would, therefore, lead us to believe that the remedy is contra-indicated in widely disseminated invasions on lung tissue.

In laryngeal tuberculosis, we must remember, should the area of disease be very extensive, that this same infiltration of small round cells and hyperemia with œdemia may also endanger life.

Experience has taught us that there is lurking danger that cannot be foreseen. This arises from the fact that tissues may be tuberculous to a degree susceptible to the action of the Koch remedy, when not otherwise recognizable, or again it is, as I have already said, made tuberculous by the process set up by the remedy. This is to be explained, possibly, by dissemination of the live bacilli. Just here I venture to say I do not approve the method of performing massage with tuberculous joints after treatment with the reagent.

If there is any known substance that will stimulate white blood corpuscles to break up foreign matter in the blood of the living animal, it should be administered during the Koch treatment. Iodide of potassium may assist indirectly in disposing of the bacilli during and after treatment.

There is one question that time alone will answer, to wit: Is the tissue immediately adjacent to the tuberculous tissue necrosed by the inflammatory process set up by the Koch remedy sufficiently tuberculous to slowly develop into recognizable tuberculosis, or is it rendered more susceptible to the action of the bacillus?

In referring to the menstruum sold by Dr. Libbertz as the Koch remedy or liquid, it is, I am inclined to believe, a menstruum made up of glycerine, gelatine and a metabolic product of the tubercle bacillus. This latter represents about one thousandth part of the mixture. Probably the menstruum contains a gold salt.

If the liquid contains that produced by the tubercle bacillus, we cannot be surprised at its special action on tuberculous tissue alone, yet it would not be very surprising if it should react on leprosy. The bacillus of leprosy has characteristics in many respects corresponding to the tubercle bacillus.

If the action of the tubercle bacillus on the animal tissue is wrought by a process of digestion, we might seek to produce its digestive ferment by growing it on an artificial medium, inoculating and introducing it into the animal economy, already the prey of the tubercle bacillus. In this tissue the bacillus would be found secreting virus enough to inflame and break up the tissue to a degree suited for its absorption and existence. The artificially added product or digestive ferment would break up the chemical relationship of the constituents of the tissues to a degree beyond that suited for the consumption by the bacillus. The inflammation produced would possibly be so acute and severe as to kill all recognizable tuberculous tissue.

When in Berlin, Prof. Dr. Koch personally expressed to me his confidence in the remedy to successfully combat lupus and laryngeal tuberculosis.

I am inclined to the belief that the remedy should be very cautiously administered to man and that laboratory work should be energetically carried on.

Foreign Correspondence.

BERLIN LETTER.

The Berlin Aquarium.—A Chicago Doctor's Adventure. — Luxation of Crico-thyroid Joint.—"Ether-Fritze."—Pennyroyal as a Poison.—Antisepsis for Chiropodists.—Death from Bromide of Ethyl.

Visiting the Berlin Aquarium the other day, I was fortunate enough to witness the representation of an interesting biological scene before a distinguished invited company, among whom were the Minister of Public Worship (Cultus Minister) and several University Professors. Dr. Hermes showed the reviving of African salamander-fish after an eight months' sleep. The fish were encapsuled in pieces of clay weighing about twenty pounds. These were partly placed in water, partly broken, the encapsuled fish freed from the surrounding mucus and also placed in water. Almost directly the fish showed signs of life, and after the expiration of a few minutes swam

freely to and fro. In case of the encapsuled fish the reviving process occupied a longer time. The trotopterus, after having lived as an amphibious animal, showed up invariably as a lively fish. The Berlin Aquarium—especially since the government has erected a station at Rovigno, Italy—contains the most interesting collection of submarine life in existence, and is one of the great points of attraction to visitors.

Speaking of visitors to Berlin, I cannot refrain from telling you about an exceedingly interesting adventure happening to a Chicago physician during the Congress. The Illinois man passed over the Linden late at night reflecting over the glory in store for his native city. Suddenly a suspicious-looking individual hustled by, closely touching the doctor. The latter, with the ingenuity of the Western man, felt for his watch, and missing it unhesitatingly began the pursuit of the robber. The suspicious individual fled through the Brandenburg Gate into the Thiergarten, the American doctor in close pursuit, loudly crying "put up that watch!" Near the Victory Column the robber was caught by the doctor, and compelled to deliver the watch, after which he was released. The Chicago man returned to his hotel, proud of himself and of his native city and country. But, lo! on the table he beheld his watch, which he had forgotten when leaving the hotel. Next morning all the papers published the story of a robbery in the Thiergarten: a French doctor, they said, had been pursued by a burly, powerful robber, attacked and robbed of his valuable watch.

Professor Braun, of the Kœnigsberg University, published the first case of habitual luxation of the crico-thyroid articulation ever described, and—what adds to the interest of the matter—observed on his own person. By a singular coincidence the Professor had the opportunity to observe two other cases of the same character. On himself, the luxation appears on deep inspiration and during gaping. It is not simultaneous on both sides, but occurs either on the left or the right side. At times the luxation occurs daily, again months may pass without it. A sensation of oppression and great anxiety is invariably connected with the phenomenon. Reduction can be obtained in a very simple manner by mere manual pressure or the act of swallowing.

A few days ago I renewed a very strange acquaintance made many years ago. Passing Stralauer Strasse in the forenoon, I saw an oddly-dressed man of about thirty-five standing before the window of an art gallery and making incessant and profound bows before the pictures of the Imperial Majesties. Approaching the queer patriot, I noted at once a penetrating odor of ether. And seeing the man pouring some of the contents of a bottle into his handkerchief with the experience of a skilled anæsthetiziser, I understood the situation. The man in front of me was "Ether-Fritze," the well-known victim of etheromania. The deplorable individual belonged to a rich and highly-cultured Berlin family, and had studied chemistry and medicine. In a chemical laboratory I had first met him. Later on he was anæsthetized in a surgical clinic, where he acquired the unfortunate habit. At present he eats almost nothing, the only desire he has being for ether, the stimulation of which keeps him up. He consumes about a pint a day, and it is thought that he would die if he should dispense with the use of the drug. I was told that there is another individual with the same habit in Berlin, a former Demonstrator of Dentistry.

Drs. Falk and Langgard, assistants of Prof. Liebreich, have recently instituted at the Pharmacological Institute a series of researches to determine whether pennyroyal is a veritable emmenagogue, and how its action is brought about. The drug, as everybody knows, being very frequently used by women without medical advice, the question whether pennyroyal is a harmless remedy is not void of interest. Haller, Govan and Marshall regard the drug as an abortifacient, while Taylor holds an opposite view, and in addition believes the drug to be quite harmless. From two to three grams of pennyroyal, given to rabbits internally or subcutaneously, produce no signs of intoxication save a conspicuous loss of balancing power. The animals stagger from one side to another. A dose of three grams suffices to paralyze the animal. Exceptionally lethal effects have been noted after comparatively small doses. Autopsies reveal invariably parenchymatous degenerations in the principal organs. The liver appears chiefly affected, showing in case of protracted exhibition of the drug, an enormous swelling; the parenchyma is brittle, the peripheral zone of acini presents yellowish foci, often as large as a bean. The heart and kidneys show yellow dots and lines; the urine contains casts and albumin. It is clear then

that pennyroyal, like phosphorus, produces fatty degenerations of the organs. Regarding the action of the drug upon the heart, the experimenters noted a slight increase of blood-pressure, resulting from a slowing of the heart's action, due to a stimulation of the pneumogastric nerve. Hence it must be said that the emmenagogue action of the drug is due solely to its deleterious effects upon the various organs, and that women ought to be cautioned against taking the drug without the physician's order. A number of accidents—collapse, disease of the liver, etc.—from the use of the drug have been observed by Dr. Marshall and others.

A recent order of the police demands all "corn-doctors" to employ perfect antisepsis in their surgical manipulations. The fact that a number of accidents have occurred here of late in the office of a chiropodist has given rise to this desirable ukase. Would it not be indicated to extend the order also to the tonsorial artists?

Recently Dr. Edel, a Berlin dentist, caused the death of his apprentice by the unwarranted administration of bromide of ethyl. The enterprising dentist, not contented with the effects of chloroform given for the extraction of a molar, resorted in addition to bromide of ethyl and promptly killed the boy. Dr. L. Lewin, Docent of Pharmacology at the Berlin University, ascribes the accident exclusively to the combination of the two anæsthetics, which he regards as an inexcusable blunder. Others again claim that the drug was impure, and that the dentist is not to be blamed for the accident. It is certain that with the exclusive use of bromide of ethyl, prepared by Merck, no accidents have been reported even by dentists who, like Dr. Gilles, of Cologne, have administered the anæsthetic in nearly a thousand cases. At the University Dental Clinics bromide of ethyl is never used, as Prof. Busch has had some very unpleasant experience with it. With proper individualization, however—exclusion of nervous and otherwise organically affected persons—bromide of ethyl appears a perfectly safe and very eligible anæsthetic for dental and minor surgery.

—To diminish the danger to life and property from electric wires, the Common Council of Boston, Mass., have passed an ordinance to appoint an inspector of wires, who shall have charge of all wires in the city.

PERISCOPE.

Relative Value of Various Anæsthetics.

In a discussion on anæsthetics before the Medico-Chirurgical Society of Glasgow, Dr. T. Brown Henderson read an interesting paper, which is published in the *Glasgow Medical Journal*, November, 1890, in which he said that next to ether and chloroform nitrous oxide gas appears to be the most useful anæsthetic agent. For short operations, requiring only a brief narcosis, it is admirably adapted, as it is rapid in its operation, and recovery from its effects is equally speedy, and it can be employed anywhere. It is gaining the confidence of surgeons, and, he thinks, it might well be in all operating theatres. St. Bartholomew's Hospital, London, in 1885, used it alone in 378 operations; in 1887, used it alone in 417 operations; in 1889, used it alone in 686 operations.

At the present time nitrous oxide is always given by anæsthetists in London before, and along with, the administration of ether. By this arrangement the narcosis is more speedily induced, and the preliminary taste of ether is avoided. It is a luxury, and is suitable for timid people particularly; besides being speedier, it is found to be safer than narcosis by any other plan.

At St. Bartholomew's Hospital, various anæsthetics used during the past fifteen years, were: Chloroform 17,666 times, with 12 deaths, or 1 in 1,472 cases; ether, 7,493 times, with 1 death; gas and ether, 12,806 cases, with 1 death; methylene, dichloride of ethydine, ethyl bromide, ethydine and gas, and various other anæsthetics, 660 cases.

Ether has been usually given by the open method—poured on a folded towel, or one fashioned into the form of a cone.

After referring to various forms of apparatus for giving ether, Dr. Henderson especially commends Clover's, with which, he says, the effects are usually of the best kind. In Leeds, under Mr. Teale, hardly any case is considered unfit for the giving of ether. The patients take it kindly with perfect confidence, old and young are easily and effectually brought under its influence. The old and bronchitic, by judicious management, have only a small quantity of well-warmed ether, and a very little suffices.

The danger from giving chloroform in small doses nowadays is, Dr. Henderson

thinks, the exception. He never hears of the long time of getting the patient under that was not uncommon many years ago. For many years, to push boldly on with the anæsthetic has been the practice all over the United Kingdom, and he says it is wise to do so in threatened vomiting.

But there are cases where A. C. E. or ether is preferable; such as those who have much fear of the operation, or of the chloroform; if the vital powers are weak from great delicacy, or from exhausting illness; if the cardiac, or the pulmonary, or the nervous system is specially sensitive to chloroform; if there is excess of urea in the blood, or of albumin in the urine, or damaged kidneys. One of the difficulties of chloroform anæsthesia is due to the uncertainty of the quantity necessary to induce narcosis. The most recent book on anæsthetics (Foy) gives the account of a patient who was with difficulty recovered from the narcosis produced by three drops of chloroform placed on a piece of cotton wool put into a hollow tooth; and of another, who was narcotized by five drops of chloroform through a Snow's inhaler. Idiosyncrasies such as these may be more common than is supposed, just as some are rapidly and severely affected by small doses of mercury, opium and other drugs.

Dr. Henderson thinks the safest way is that introduced by Mr. Bloxam, of St. Bartholomew's, London. A few drops are sprinkled on a starched towel or flannel cap, and a drop added every second. It is speedily successful in producing anæsthesia, though in some cases it may be a little longer than when it is poured on more freely. He thinks the administrator keeps a better grip of his patient by the drop system.

Four hours before chloroform administration it is well to allow a light, nourishing, easily digested meal. Before ether, no food should be taken for six hours.

Some years ago the nitrite of amyl dropped on lint and held over the mouth was supposed to prevent and recover from accidents. It was also used, mixed with chloroform, as chloramyl, but after a short administration, it was found to lower the blood-pressure instead of raising it. Inhalations of ammonia, in cases of weak or fatty heart, have been found useful, previous to the use of chloroform. Oil of turpentine 1 part, chloroform 4 parts, was believed to prevent pulmonic paralysis. Hypodermic injection of morphia half an hour before the administration of chloroform was supposed to be useful in preventing a fatal issue.

Dr. Bietels, at St. Petersburg, has read a paper on the use of a mixture of chloroform and oxygen. Less chloroform is required than by the usual methods of administration, consequently with less danger, no sickness follows, and the pulse is unchanged. The difficulty is to blend the vapor of the chloroform with the oxygen gas.

Dr. Wood, of Philadelphia, in his address at Berlin, says he found the hypodermic injection of digitalis produced a persistent rise in the arterial pressure, with an increase in the size of the individual pulse rate. In cases of weak heart, where chloroform has to be administered, a dose or two at least of digitalis would greatly lessen the risk of cardiac collapse. The wonder is that this did not occur to us before. Dr. Wood also found the injection of a solution of strychnine into the jugular vein to produce surprising results. It caused a gradual rise of blood-pressure, and always caused an extraordinary and rapid increase in the rate and extent of the respiration. Every one knows the antagonism which exists between chloroform and strychnine. Dr. Henderson would like, however, to have the dose and mode of giving this powerful restorative agent from a scientific authority.

Speaking on the subject of ether administration on the same occasion, Dr. Hartley, of Leeds, assistant to Mr. Teale, suggested the following rules and precautions to be observed in the use of ether were mentioned.

1. As far as possible anæsthetics of all kinds are best given in the early morning when the stomach had been empty for several hours and the body refreshed by sleep; but in any case let no solid food be taken for six hours, nor liquid food for four hours previous to the use of the agent.

2. Avoid giving alcoholic stimulation before administering ether, the effect of this being only to increase the narcotization, and therefore the danger. For a similar reason avoid the use of opium before or very soon after ether.

3. Watch the respiration, the dangers in respect of this function being (1) too deep carbonization of the blood, and (2) mechanical obstruction. The delicate skin of the lobes of the ear is a good index as to whether the patient is becoming too deeply carbonized, and is always open to inspection. Obstruction to respiration may take place from the simple falling back of the tongue;

from the presence of blood, food or foreign bodies in the larynx; from spasm of the glottis; from the accumulation of frothy mucus in the larynx or lungs. If this latter occurs in marked degree, it is often due to the use of too large a percentage of ether vapor in the air breathed.

4. Watch the general character of the circulation, to note the effects of shock, hemorrhage, etc., or a tendency to engorgement of the right side of the heart.

5. Be prepared for any vomiting that might take place.

6. In recharging the inhaler, if this was necessary, beware of the presence or proximity of a naked light, the vapor being very inflammable.

7. Do not use more ether than is necessary to keep up complete anæsthesia.

8. Do not allow the patient's body to be uncovered more than is absolutely necessary for the conduct of the operation. Where a large surface has to be exposed, compensate by extra clothing, hot flannels, hot-water bags, etc., to the covered portions of the body.

As to circumstances which might or might not contra-indicate the use of ether, Dr. Hartley said that he had given ether to people of all ages, from a child of 3 to an old lady of 86, to whom he administered it on three different occasions. No class of cases seems specially prohibitive of ether except patients suffering with acute inflammatory affections of the lung. He had used it in almost all possible operations of surgery, from the extraction of a tooth or the reduction of a dislocation to prolonged abdominal operations of all kinds, operations on the cranial cavity, and in numbers of cases to patients with chest diseases, such as pleuritic effusions, empyema, abscess of lung, sub-diaphragmatic abscess, and in one case to open a suppurating pericardium complicating empyema.

Heart disease does not contra-indicate it. The general effect of ether in the circulation is as a stimulant. In aortic disease this is often beneficial; but if there is a tendency in the venous system to be overloaded and turgescent as in mitral disease, or when the right side of the heart is weak and dilated, or from simple over-carbonization of the blood; then the administration of ether calls for greater care.

Chronic drinkers are bad subjects for anæsthetics of any kind, but specially, perhaps, for ether.

Leprosy in China.

The *Indian Medical Gazette*, November, 1890, says editorially that lepers in China appear to be treated with scant courtesy. Driven from their homes, from their relations and friends, and reduced to a state of destitution, there remains to them but one or other of two things, either to choose to enter the leper villages of China, or to leave the country and seek refuge in some of the adjacent English settlements. Hong-Kong, with no law against the importation of lepers, nor against their begging in the streets, becomes a perfect El Dorado to the leprous Chinamen from the mainland. Dr. Cantlie in a recent paper, read before the Hong-Kong Medical Society, brings this subject prominently forward, and in an interesting and instructive thesis advocates the establishment of quarantine retreats for lepers, who have become British subjects, which he thinks could easily be arranged on one of the numerous islands around Hong-Kong.

In Hong-Kong itself there is an order in force that whenever there is a leper reported, the police shall arrest and detain him until the Colonial Surgeon gives an opinion on his condition, when the leper may be sent away to the mainland. The authorities also at the Native Hospital have power to send lepers immediately they are discovered to some one of the leper villages near Canton. It is impossible, however, to prevent the import of lepers, for, unless by skilled inspection, it is impossible to detect a leper in the earliest stages. Importation of lepers in the early stages of the disease and deportation at a later stage when the ulceration has become so unsightly as to cause the authorities to take action, leave a goodly number of lepers free in the island, and it is this remnant to which Dr. Cantlie would draw attention. He believes with many others that leprosy if it had been communicable only in the later stages, would have long since disappeared, for the unsightly leper with ulcers upon his body has always been studiously shunned. In referring to the manner in which the disease spreads, he attaches much importance to the possibility of house infection, a theory commonly held in Demerara, and mentions the case of a General commanding the troops in that colony, who with his wife and children were attacked with leprosy and died.

It is interesting to learn the Chinese opinion concerning leprosy. They have no

doubts on the subject, being strongly convinced of its communicability and incurable nature. For these reasons they hold that the only manner of dealing with leprosy is segregation, and putting these views into practice, every district in China has its leper home, the inmates of which receive an allowance from the Government, and have land to till. Various forms of treatment have been tried at Hong-Kong. The most successful in mitigating the effects of the disease and in causing improvement in the leprous patches, has been first of all good food and tonics, then the internal administration of chaulmoogra oil in the form of pills, 5 to 15 drops twice a day, and the outward application of the ointment recommended by Dr. Unna consisting of chrysarobin 5 per cent., salicylic acid 2 per cent., ichthyol 5 per cent. When the application was for the face, then pyrogallol was used in place of chrysabrobin, and 10 minims of dilute hydrochloric acid was given three times a day to counteract the deleterious effects of pyrogallol on the blood. The amelioration of the symptoms by this method of treatment is sometimes remarkable, and though no cure has been or is likely to be claimed, yet much might be accomplished in rendering the life of the leper more comfortable by a systematic adoption of this and other similar forms of treatment.

Diagnosis of Paget's Disease of the Nipple.

Surgeons and dermatologists have not infrequently hesitated over a case of chronic inflammation of the nipple resembling in its external appearance an eczema, doubting whether the radical operation of excision of the breast should be undertaken; or, in other words, doubting whether they stood in the presence of what was really chronic eczema, or that affection which long ago Paget taught was likely to be followed by a carcinomatous involvement of the gland. Failure in the ordinary applications for eczema, the absence of itching, suspicious induration and long-standing duration have been the clinical data upon which a diagnosis was usually founded.

Darier, in April, 1889, made a communication to the Biological Society of Paris concerning a new form of *psorospermiæ* found in *Paget's Disease of the Nipple*, describing the parasitic *sporozoa* as occurring inside the epithelial cells of the affected parts. These observations have been confirmed and the whole subject greatly elaborated by Louis Wickham, in his admirable monograph, *Maladie de la Peau dite Maladie de Paget.* According to these authors, the parasitic bodies are found usually in the lower layers of the epidermis of the diseased tissue, and also in the milk-bearing ducts, and measure from one-third to one-half of the stratum muscosum. So impressed is Wickham with these discoveries, that in the conclusion of his essay he states that Paget's disease is due to the parasites of the class *sporozoa*, and the order *coccidia* or *psorospermiæ*, and should be relegated to the group *psorospermosis.* He believes, moreover, that the presence of these bodies, readily detected by microscopic examination of the crusts from the diseased nipple, constitutes an excellent and rapid method of diagnosis.

Further confirmation of these observations comes from Dr. A. B. Macallum (*Canadian Practitioner*, October 16, 1890), who has examined two cases of Paget's disease, and found the bodies in question. In order to avoid disputed points in pathology, Macallum suggests the word *endocyte* as a neutral and readily applicable term to describe these bodies, until their true nature shall be exactly determined. Darier advises that the crust shall be teased out on a slide in Gram's iodine solution and examined with a moderately high-power objective. If fat is present, this may be removed by placing the specimen for several hours in a 10 per cent. solution of ammonia. Macallum modifies this method and secures a permanent preparation by attending to the following directions: The crust, or a portion scraped from the nipple, is teased out in a drop of tincture of iodine on the slide, the cover glass put on, and after a couple of minutes a drop of 50 per cent. glycerine run in. The alcohol and the iodine fix the endocytes, and the iodine gives them a brown-yellow tint, which fades slowly in glycerine. This investigator was thus able to demonstrate these bodies in the free cells, the unteased portions, and in the epithelial cells covering the retracted nipple and filling the ducts. Endocytes present in epitheliomata are distinguishable from these by the absence of cystic membrane, their smaller size and their situation in the central cell of the "nest." Macallum, while unwilling fully to endorse the views of Darier and Wick-

ham, is convinced that the sporozoa furnish a valuable aid in the diagnosis of Paget's disease.

This seems to us a most important field for future work, and not only the diagnostic value of the endocytes, but also their essential nature, are worthy of the careful study which they are at present attracting as etiological factors in various chronic cutaneous disease, and in epitheliomata.—*University Medical Magazine*, December, 1890.

Legislation for Inebriates.

The *Southern Medical Record*, December, 1890, in an editorial, entitled, "A much needed legislation," says: "Now that the representatives of the people are assembled at the capital in the capacity of legislators, it is in order for us to make such suggestions as will more fully acquaint them with our wishes and necessities. Some provision ought to be made for the care-taking and reformation of the unfortunate inebriates of the State. It is a crying shame that nothing has been done in the Empire State of the South to give this greatly needed relief. The world is very uncharitable towards the victims of alcohol. Prohibitory laws have proven a failure; public sentiment is morbid on the subject. Temperance union movements have done much good in educating public opinion, but cannot reach these poor, ruined individuals. What shall be done with them? If inquiry be made, it will show that a large per cent. of the crimes committed—especially the homicides—are due to the effects of whiskey, or some other alcoholic liquor. The sale of intoxicants is licensed and the revenue turned into the public treasury, but there is no provision made to reform the miserable drunkard. Why is this? It is because of the *false opinion* that is abroad that drunkenness is a *sin* but not a *disease*. Such belief obtains only among the uninformed. But we will not stop here to discuss the question. We know whereof we speak when we say that inebriety is one of the most intractable diseases known to the science of medicine. It makes a physical, mental and moral wreck of the individual, unless restored by appropriate treatment. Leaving all other questions aside, we feel that if the State of Georgia would establish and endow an asylum for these unfortunate citizens it will prove a most economic legislation. The cost of keeping and prosecuting criminals, and providing for the insane in the asylum, would soon diminish sufficiently to admit of the establishing of suitable hospitals for the inebriate without any increased expense to the State. Humanity cries out, the heart-broken wives cry out, and the worse than fatherless children cry out for something to be done in this behalf. Legislators have promised to make needed reforms. Here is their golden opportunity. We are confident that Governor Northen will stand by them; that the people will give them their hearty endorsement, and when they return to their homes, it will be said, 'Well done, thou good and faithful servants.'"

Treatment of Gonorrhœa.

The following methods of treatment of gonorrhœa are collected from the *Deutsche Medizinal-Zeitung*, October 16 and 23, 1890.

Friedheim made a careful investigation of the effects of different injections in the dermatological clinic at Breslau. Of mercurial agents the best is hydrargyri salicylatume 1–270. The common astringents, zinc and lead salts, tannin and subnitrate of bismuth, have no antiseptic properties, and should not be used during the acute stage of the disease. Boric acid, antipyrin, resorcin, salicylate of sodium, often influence the inflammation favorably, but are useless as germicides. He uses in the first stages a weak solution of nitrate of silver, about one to three thousand, four to six times a day, later, some milder agent.

Diday uses an injection of nitrate of silver solution, 1–20, and allows it to remain in the urethra from fifteen seconds to two minutes, according to the amount of pain. Picard believes that nitrate of silver will abort a gonorrhœa, and is harmless if given before pus appears; after that it may do harm.

O'Brien uses injections of sea-water seven or eight times a day in the acute stage.

An injection given by Impamlomenti, consists of a one per cent. solution of creasote in an infusion of camomile, with a little boric acid added.

Pyoktanin has been used by several observers with good results.

The ointment-carrying sound of Unna is recommended by several authors for chronic gonorrhœa. Szadek uses an ointment containing nitrate of silver one per cent., and

balsam of Peru two per cent. Sperling and Bender nitrate of silver one per cent. in lanolin. The sound remains at first three, later fifteen minutes in the urethra. For the second stage Lewis uses an ointment with lanolin as a base, and a non-irritating antiseptic, such as resorcin, four per cent.

Allen calls attention to the use of the endoscope, through which a cotton-stick may be used, as a method of application to the urethral mucous membrane.

Internally, Lane obtained good results in sixty per cent. of his cases in from two to seven days, with salol, in doses of from five to fifteen grains, three times a day. In chronic cases injections also must be employed. Dreyfous uses salol at the same time with the balsamic remedies.

Bird has obtained good results by the internal administration of calomel.

Stern recommends a thorough washing of the body in the neighborhood of the genitals, and the patient's clothes, with a one to two hundred solution of corrosive sublimate, to prevent an auto-inoculation, which he considers a common cause of recurrence of gonorrhœal symptoms, and of so-called chronic gonorrhœa.—*Boston Medical and Surgical Journal*, December 4, 1890.

Pyoktanin.

Dr. Riesmeyer has a paper on pyoktanin in the *St. Louis Courier of Medicine*, November, 1890, in which he gives his opinion of pyoktanin after what seems like a fair experience. He says that pyoktanin has the advantage over all other diffusible germicides in not coagulating albumin. It keeps the granulations at an even level, the granulations looking solid and healthy. Wherever it was applied to granulating surfaces, he never saw spongy or exuberant granulations. He adds that it will probably put a granulating surface into an excellent condition for grafting purposes and plastic operations in general. Carbolic acid and iodoform often cause the granulations to be uneven; while the wounds treated with bichloride of mercury frequently have white necrotic deposits. In the granulating wound treated with pyoktanin he observed a rapid reproduction of epithelium at the edge of the wound. Carbolic acid and bichloride of mercury have the disadvantage of often destroying newly formed epithelium, unless the solutions are too weak to combat suppuration effectively.

Dr. Riesmeyer's observations in the cases so far treated lead him to surmise that the chemical composition of pyoktanin is changed by some substance in the animal tissues, or it may form new combinations which are colorless and do not stop the growth of bacteria, and that the failures in arresting certain forms of suppuration, probably all those where the micro-organisms are located deeply in the tissues, is due to this property. Dropped on the skin or mucous membranes, the stain produced will soon disappear, showing that here also must be an agent present, which produces a change in its composition. In order to see whether albumin had anything to do with this change, he placed a silk thread stained with pyoktanin blue, about $\frac{1}{2000}$, in the white of an egg. In 24 hours the thread had lost its blue color, and no trace of pyoktanin could be seen in the white of egg. Since, however, the white of egg contains other substances besides pure albumin, this experiment may not count for anything.

It will be of importance to know whether, when pyoktanin is injected hypodermically into diseased tissues in as concentrated solution as possible, it will destroy the micro-organisms before it undergoes the change referred to or not. No doubt this point will soon be cleared up by experimental research.

At the present time we are not able to formulate its exact indications in surgery with any degree of accuracy, since the technique of its application is still in its infancy. In certain selected cases it will be of excellent service, but on account of the change it seems to undergo in the tissues, and also on account of its annoying staining properties, Dr. Riesmeyer is inclined to think that the limit of its usefulness in this branch of medicine will be rather narrow in comparison to the hopes that its germicidal properties in the test-tube have inspired.

Immunity from Diphtheria and Tetanus.

Dr. Behring has made known the chemical agent employed by him and Dr. Kitasato in their experimental investigations on diphtheria and tetanus. This is trichloride of iodine, which, injected subcutaneously in animals inoculated with either virus, not only cures them, but renders them immune to subsequent infection. Peroxide of hydrogen in 10 per cent. solution can also confer such immunity in respect of diphtheria.

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THE KOCH REMEDY FOR TUBERCULOSIS.

It is now about two months since Koch made the announcement of his "remedy" for tuberculosis, and it may be said to have had a fair opportunity to show what it would accomplish. Of course there has not been time to show cures without possibility of recurrence—years might not suffice for this; but there has been plenty of time to show if it could produce improvement of steadily progressive character and furnish ground for hope that eventually some form of tuberculosis would be—in a fair sense of the term—cured through its influence upon the human economy.

The readers of the REPORTER have been given, in a series of carefully prepared special articles, an account of the experiments made with the "lymph" in all parts of the world, with their results, and the opinion of men of recognized ability in regard to the value of it.

Unfortunately after all it is impossible to say that the lymph can be relied upon for any of the purposes indicated by Koch in his first announcement. It is not a trustworthy means of diagnosis, or a reliable remedy for any form of tuberculosis; while experience has demonstrated that it is dangerous when used either for diagnosis or for treatment.

Professor Virchow, who has been making investigations on the lymph treatment, last week asserted, after twenty-one *post-mortem* examinations of patients who had died after injection, that the Koch method is not what had been hoped or claimed for it, and that there can be no permanent benefit from it to the patient. The tubercle bacilli he says are not killed by the lymph, but are only driven out to take lodgment elsewhere. Thus, according to his theory, tuberculous affections, while they may disappear from one part of the body, break out in other places in as discouraging a form as ever. To this we may add that the phenomena of certain cases, in which it has been asserted that unsuspected tuberculosis of the lungs had been revealed by treatment with the lymph, warrant the belief that the lymph may set up a tuberculous process in persons entirely free from disease.

The REPORTER has, as stated above, contained a very carefully prepared synopsis of the developments in connection with the testing of Koch's "remedy," and the readers of the REPORTER will be promptly informed of any developments in connection with the subject; but we doubt that it will require as much space as has been devoted to it in the last four issues, for it seems hardly worth while to continue the weekly publication of accounts which are so largely mere repetitions of fruitless or injurious experiments on human subjects.

Furthermore, we believe the time has come when such experiments ought to be discontinued, or at least restricted to a very

small sphere. In this country we think they ought to be wholly abandoned. Last week a large number of tuberculous patients in the Philadelphia (Alms House) Hospital refused to submit to be experimented on, and although the physicians with the lymph from Koch's laboratory were chagrined, we cannot believe all of them thought the patients were unwise.

We would suggest that American patients be allowed the benefit of such medical and surgical skill as exist in the profession until the Germans have shown that Koch's "lymph" is really of use. Let the latter do as much experimenting as they may consider wise and right; but let our countrymen go back—those who left them—to the legitimate methods practiced before it was heard of.

It is with regret for the disappointed expectations against which we warned our readers two months ago, that we suggest to them to read again and carefully the Editorial in the REPORTER of November 15, 1890, and to reflect on the confirmation of its statements which has been supplied by the history of Koch's "remedy" since that Editorial was published.

CANCER GERM.

For several years bacteriologists have been studying the tissues and secretions of each of the most important diseases in the hope of finding some germ which may possibly be the essential cause of the disease. The interest at present felt in this kind of study is widespread and intense. Doubtless hundreds are at this moment at work upon the pathology of cancer, and are endeavoring to discover its cause. Many of those who fail to find any germs in cancer will think it not worth while to report their investigations; but a number have already announced what they believe to be discoveries of germ life in cancerous growths, although no one has hitherto succeeded in demonstrating the supposed germs to the satisfaction of others, still less has any one succeeded in tracing a causal connection between any particular micro-organism and cancer. In the *Deutsche Medizinal-Zeitung*, November 20, 1890, Dr. J. E. Alberts gives a very thorough review of the present condition of the cancer question and of its most recent and important literature. Dr. Alberts's own experiments have not been insignificant. He injected dogs with a sterilized emulsion of cancer-juice, prepared aseptically from a carcinoma removed from a living person. The result was entirely negative; the animals lived for months healthy, and at the autopsy nothing was found by macroscopic or microscopic examination, except a trace of the injection wound. Results of transplanting pieces of recently removed carcinoma were just as fruitless; recovery from the operation occurred, and at a subsequent autopsy nearly all of the transplanted piece had been absorbed. Other investigators, particularly Darier, Albarran, Thoma, Wickham and Sjöbring, have described, with more or less precision, a parasitic organism which they have found in cancer. An interesting fact about their descriptions is that all the writers named, except Thoma, who expresses no opinion, speak of the organism as belonging to the protozoa.

The most recent article on the subject of an organism found in cancer is by Dr. William Russell, Lecturer on Pathology in the Edinburgh School of Medicine, and is published in the *British Medical Journal*, December 13, 1890. Dr. Russell writes that he has been occupied for several years in tracing the mode of growth of cancer in different organs. In the course of these studies he met with appearances which he could not fit into modes of cell-growth and nuclear proliferation. He was finally able to differentiate them by a process of double staining with fuchsin and iodine green, the latter replacing the former in everything except the bodies in question. Although these bodies were found in practically every case of

cancer examined, Dr. Russell determined to eliminate all possible sources of error before coming to any conclusion with regard to them. To this end, he ascertained, by check experiments, that they were not produced by accidental impurities in his materials, bottles or stains, nor by a trick of staining; that they were not nuclei of tissue-cells in exaggerated, formative and reproductive activity; and that they were not globes of some form of degeneration. Dr. Russell examined with great thoroughness and apparent fidelity all kinds of tissues and disease products to see if he could discover these "fuchsin bodies," as he calls them provisionally, in anything but cancer. He found them in one case of supposed sarcoma; in two old specimens, one of adenoma of the mamma and one of gumma of dura mater; in one case of syphilis in which, some six or seven weeks after primary infection, there was only a skin eruption but extensive destructive lesion of the fauces and larynx, and even of the bones of the vertebræ behind the fauces; and in a polypus from the ear, which consisted in greater part of fibro-myxomatous structure, but was in its deeper part adenomatous, and it recurred *in loco* after removal; in one case of gelatinous degeneration of the knee-joint, with old sinuses; and in a large, very intractable ulcer of the leg. Tissues were examined from fifty or sixty different cases in all.

On the other hand, forty-five cases of cancer were examined, and in forty-three the fuchsin bodies were found. As a rule, they occur in clusters containing from three to twenty or more. Wherever they occur they almost always show a clear space around them. They can, Dr. Russell says, be found readily with a lens of one hundred diameters if the light is good; their brilliant red or purplish color forms a striking contrast with the green and delicate purple of the tissues. The individuals of which the groups consist are in form perfect spheres, the largest being half the size of a red blood corpuscle. They appear perfectly homogenous and structureless as examined by daylight, and the larger clumps are held together by a delicate cementing substance which stains faintly. From a careful study of these fuchsin bodies, Dr. Russell says he has absolutely no doubt that they are organisms belonging to the sprouting fungi, a class of fungi which includes the yeast plant.

Dr. Russell's observations are of very great interest, and seem to have been made with great care. If they are confirmed by other pathologists, and these fungi are found to be the invariable accompaniments of cancer, it will remain for some one to prove their relation to the cause of the disease. This can be done only by inoculating animals with pure cultures, and thus producing cancer, which must contain the same fungi, capable of cultivation. At present bearing in mind Scheuerlen's announcement of a bacillus of cancer, and its subsequent fate, we can only suspend judgment and wait for further light.

THE AMERICAN MEDICAL ASSOCIATION.

In an organization like the American Medical Association the management is naturally controlled by those who attend its meetings regularly and who take the most active interest in its government. Ordinarily this fact enables members who have no desire for office or emolument to enjoy the privileges of an association without bearing the burdens or meeting the cares of office, while these fall to the lot of those who think the pleasures or advantages of office more than compensate for them, and the organization goes on smoothly and prosperously under this arrangement.

But at times it is desirable for every member of an association to consider carefully the policy of the organization to which he belongs and the purposes of those to whom its management has been delegated, and to inquire if they be what is best for the or-

ganization. Such an occasion has just arisen in the American Medical Association, and it has been precipitated by the proposition of certain of the Trustees of the *Journal of the Association* to transfer its place of publication from Chicago to Washington. This proposition is so radical and of such consequence to the prosperity of the *Journal* and the welfare of the Association that it ought to be most carefully considered between this and next May when the Association meets. A right decision of it is of the utmost importance, and to this we invite the thoughtful attention of all the members of the Association.

It might be well to have the subject discussed in the various County and other Societies which send delegates to the Association, and that these should instruct their delegates how to vote on the proposition.

We speak of this because of our conviction that an error committed now would very seriously impair the usefulness of the Association, and our hope that no error may be committed.

Book Reviews.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the Reporter.]

FAMILIAR FORMS OF NERVOUS DISEASE. By M. Allen Starr, M. D., Ph. D., Professor of Diseases of the Mind and Nervous System, College of Physicians and Surgeons, New York. With illustrations, diagrams and charts. 8vo, pp. xii, 339. New York: William Wood & Company, 1890. Price, $3.00.

Dr. Starr, in his preface, calls attention to the advances in neurology, which he believes have been of late more rapid than those in any other department of medicine. The result, he says, has been to render diagnosis both easier and more precise, and to open to surgical treatment many diseases formerly considered fatal. The object of the present volume is declared to be to make available to the general practitioner some of the results of later investigations which have a direct and practical bearing upon commoner forms of nervous disease. The facts which Dr. Starr seeks to emphasize are such as enable one to make an accurate diagnosis of the nature and of the location of lesions of the central nervous system. The book is not intended as a treatise on nervous diseases, but as a series of clinical studies of their more familiar types. The first eight chapters are taken up with the localization of cerebral functions; the functions of the cortex and of the motor, visual and cortical areas, and the tracts within the brain, and with the diagnosis of sub-cortical lesions. Chapters ten, eleven and twelve deal with localization of diseases of the cord, and the following chapters successively with the paralyses of infancy, multiple neuritis, paralysis agitans, chorea, epilepsy, some painful functional affections and their treatment, the treatment of neurasthenia, the ordinary forms of insanity, and a final section on electricity as a therapeutic agent.

In the treatment of epilepsy Dr. Starr uses a combination of the bromides of potash, soda and ammonia, with the addition of a small amount of arsenic and an alkaline potash salt. In cases of nocturnal epilepsy he recommends giving also five or ten minims of the fluid extract of belladona or $\frac{1}{120}$ of a grain of atropine at bed-time. He says that chloral is sometimes a helpful adjuvant, and so is tincture of simulo. Every patient of Dr. Starr who has an aura is furnished with a small bottle containing cotton saturated with nitrite of amyl. In about one-fourth of the cases this when inhaled aborts the attack.

Of electricity as a therapeutic agent, Dr. Starr says: "My experience coincides with that of Gowers, that the therapeutic effects of electrical applications have been much exaggerated and are really quite limited."

The book shows that the author has obtained all the light possible from experimental physiology and pathology, and that he has checked those results by careful clinical observation; as a consequence, he has produced a thoroughly trustworthy, and a very interesting volume.

L'INTOXICATION CHRONIQUE PAR LA MORPHINE ET SES DIVERSES FORMES. Chronic Morphine Poisoning, etc. By Dr. L. R. Régnier. 8vo, pp. 171. Paris: Office of the *Progrès Médical*, 1890. Price, 3 francs 50 centimes.

Régnier credits Nussbaum, in 1864, with the first observation showing the evil effects of prolonged injections of morphine. Since then important works have been written by Lewenstein, Erlenmeyer, and others. Régnier examines particularly the symptoms evoked by chronic morphine poisoning. He finds that morphine produces modifications of sensibility, anæsthesia in hyperæsthesia, while the sense of touch is often lessened in delicacy or perverted. Paralyses are rare, but vision is often affected, and the memory, judgment and will are lessened in some patients to such a degree that they fall into true dementia. It would appear that when pain exists and morphine is used to overcome it, the evil results are less serious, and that, when the patient dies, it is from the progress of the disease causing the pain, or from some intercurrent affection. Also, according to Régnier, morphine habitués who are content with moderate doses may live well for long years with their poison without being inconvenienced except by more or less considerable emaciation, by constipation, and by a certain degree of apathy.

Those who become addicted to the habit from the desire for a stimulant appropriate to their fancied needs Régnier described as morphinomaniacs and "morphinomania" is the title of the second division of the book. The recent morphinomaniac, Régnier says, is likely to become a proselyte-maker among his friends, who may be led to try the drug out of curiosity, and then, as Landowski says, there is "one morphinomaniac more."

The disease appears to be of more frequent occurrence in men than in women. Its various and progressive stages are well described by Régnier, who

reports sixty-seven case in illustration of the points raised. As to treatment, he says that in inveterate morphinomaniacs one cannot count much upon the efficacy of treatment. When treatment succeeds, the recovery is not ordinarily maintained. Immediate and complete suppression of the use of morphine, he says, is not always possible, and its effect ought to be watched attentively in inveterate cases. Complete and final recovery is rare and can be hoped for only in those whose passion for morphine is of recent date and who do not have any hereditary defect.

A good bibliography is appended to Régnier's book, which is a valuable contribution to the literature of an extremely important subject.

Literary Notes.

—The *Illustrirte Monatschsrift der Aertztlichen Polytechnik*, which brings each month a most interesting summary of new inventions in medical and surgical appliances and advances in the treatment of deformities, will begin the year 1891 by uniting with the *Fortschritte der Krankenpflege*, and will hereafter be published by Fischer's publishing house in Berlin, The union is one which promises increased interest and usefulness for both journals.

—Rudyard Kipling contributes the complete novel, "The Light that Failed," to the January number of *Lippincott's Magazine*. Kipling is attracting more attention at present than any other living writer. His force and originality have taken the world by storm. "The Light that Failed" is his first novel and fully justifies the expectations he has raised by his remarkable short stories. It is the story of an artist's life and love, and Kipling shows that he fully understands an artist's outlook upon life, and his hopes, expectations and fears. It is his comprehension of the inner and outer life of men, and his ability to portray both, that is the secret of Kipling's power. In him what is called realism and idealism are blended.

—The first number of the *Balneologisches Centralblatt*, dated October 3, 1890, is at hand. It is a journal in appearance like the *Centralblatt für Chirurgie*, and that *für Medecin*, with which all medical readers of German are familiar. It gives promise of being an interesting and instructive journal on its subjects—balneotherapy, hydrotherapy, massage, gymnastics, etc. It is issued every two weeks by B. Konegen, in Leipsic, and the price is five marks each six months.

Special Article.

KOCH'S REMEDY FOR TUBERCULOSIS.

A RESUMÉ OF ITS HISTORY.

[*Continued from page 51.*]

Dr. Saundby and Messrs. Simon and Barling, in the *Birmingham Medical News*, Dec. 1, 1890, give a very moderate account of their impressions of the value of the lymph, as seen in use at Berlin, where they had an opportunity of watching the treatment of a number of cases of laryngeal and pulmonary phthisis under the care of Professors Fraentzel and Senator in the Charité Hospital, under Professor Ewald in the Augusta Hospital, and under Dr. A. Levy at his private Clinic. They saw "no case that could be regarded as cured, and in some improvement was doubtful, but others expressed themselves as feeling decidedly better, and there was evidence of this in the cessation of night-sweats, diminished cough and expectoration, and increase of weight." They point out that it is common in cases of phthisis for the patients to lose weight in the early stages of the treatment, but this loss is more than made good later on. With regard to lupus, the authors say that whatever may be the future fate of the patients whom they saw, there could be no doubt that at the time they were remarkably improved, while in some cases no active disease could be detected. In tuberculosis of lymphatic glands they were also able to observe considerable improvement also. With regard to joint disease, they saw instances in which there had evidently been distinct improvement; but none in which a cure had been effected.

The *British Medical Journal*, December 20, quotes a report on the Koch's Treatment in Leprosy, in the *Semaine Médicale*, December 10, of a patient presenting the characteristic signs of leprosy, shown by Dr. Max Joseph at a meeting of the Berlin Medical Society on November 26. He had a well-marked leonine countenance, but there was no ulceration of the face. He was treated with injections of Koch's fluid, and in a short time the chin and the nose became covered with little crusts very close together. Each of these scabs covered a tiny ulcer of about the size of a pin's head. The crusts were exactly like those which are formed on the surface of a lupus patch during the period of reaction. There was no fever or other sign of general reaction. The diagnosis of leprosy was confirmed by microscopic examination of a piece of skin excised from the chin a few days before the injections were begun.

The Berlin correspondent of the *Lancet*, December 20, 1890, gives an account of a patient with tuberculosis of the larynx, treated by Gerhardt, on whom tracheotomy had to be performed to prevent imminent death due to closure of the chink of the glottis.

The *Journal de Médicine*, December 14, 1890, says: Seventeen deaths in Germany, four in Austria and one in Paris—such is the account of Koch's method during the week just ended.

In the *Revue de Laryngologie*, December 15, 1890, Baratoux gives a careful resumé of the operations of the lymph thus far—especially from the standpoint of the laryngologist. As to its diagnostic value he calls attention to the uncertainty of the reaction and the fact that non-tuberculous patients manifest it—persons with leprosy, syphilis and scarlatina, while persons with tuberculosis laryngitis do not always show it. Its curative properties he regards as still less worthy of confidence. The ameliorations noted are in no sense greater than are observed under other methods of treatment, while the lymph seems to give rise to ulceration and the development of acute miliary tuberculosis—in one case he speaks of the inoculation as having advanced the course of the disease six months. The reasons he gives, he says: "compels a reserve more than justified for this method of treatment which after all has given no results, but which facilitates the increase of the malady and even, it is said, the development of latent tubercles, and perhaps even of those which did not exist before."

One of the most important communications in regard to the Koch remedy is that of Dr. Williams, of the Brompton Hospital for Consumptives, in London, in the *British Medical Journal*, December 20, 1890.

It is a curious spectacle, he says, and one by no means flattering to the votaries of science, to see the medical world of Berlin given up wholly to the worship of "Koch's injection" and "reaction process," and all the usual pathological and clinical phenomena of tuberculosis set aside to make way for the one newly-found distinction of reaction or non-reaction after lymph injection. He visited nearly all the clinics containing cases of phthisis, and examined about 100 in whom the disease dated from months to years, and whose lungs showed great diversity in the extent the lesions present. There was no lack of opportunity of studying phthisis in the Berlin hospitals, for the city was fast becoming the receptacle of the phthisis of Germany, and even of some neighboring countries, to the exclusion of other diseases. The Moabit Städtliches Hospital of 700 beds already contained a large proportion of consumptives, some of whom are under the personal observation of Professor Koch. The most striking effects of the injection were in laryngeal phthisis, where, with the reaction, swelling of the mucous membrane, and separation of grayish sloughs are visible under the laryngoscope, and, according to Professor Krause, both exfoliation and reabsorption of the swelling take place. Improvement in laryngeal phthisis is common, but complete cure rare.

The great mass of the cases of phthisis were such as may be found in Brompton and in other chest hospitals—partly cases of tuberculization, partly cavity cases, though the conditions of hospital life are in many respects different. The chief symptoms in consumptive cases appeared to be rapid rise of temperature (reaching 103°, 104°, 105° and even 106° F.), quickening of pulse and respiration, the latter being especially marked, occasionally vomiting, increased cough and expectoration, with inspiration of the latter, often aphonia from temporary laryngeal catarrh. In some cases a scarlatinal rash has appeared, and in others (though generally lupus cases) a papular eruption, as Dr. Williams witnessed in two patients. In a few the nervous system appears much affected, as one patient became almost melancholic, and another perfectly unconscious after injection. The whole of these symptoms pass off in a few hours, and the patient returns to his ordinary state till the next injection. This is repeated the next day or in a day or two with increased dose, and continued till all reaction ceases, when the tubercular disease, as far as active tuberculosis is concerned, is held to be arrested.

Nevertheless cases occur which cease to react under strong injections but still present the physical signs of phthisis and whose sputum contains tubercle bacilli. The existence of a reaction after injection is said to prove unmistakably the presence of tuberculosis, and Professor Koch informed Dr. Williams that if a patient, after successive injections, reached the centigram dose without reaction he could be held free from tuberculosis. This may be so. But Dr. Williams examined in one of the clinics a middle-aged man, with a well-marked cavity in the upper lobe of the right lung of some standing, with marked fibrosis of the rest of the lung and with some necrosis of the sternum, the supervention of which had relieved the cough, expectoration and other lung

symptoms. The sputum contained no tubercle bacilli. This patient gave no reaction after strong injections. As an example of the extent to which the reaction test is pressed Dr. Williams gives the following account.

A young man, with a history of cough and expectoration, was injected with a moderate dose. He had no physical signs or tubercle bacilli in the sputum. No reaction following, the injection was repeated after a few days' interval. Still no reaction. A third and somewhat stronger injection was followed, however, by a decided reaction, the temperature reached 102.2° F., crepitation sounds were audible at one apex and tubercle bacilli detected in the sputum. This case was shown to Dr. Williams as a proof of the value of the injection as a means of diagnosis, but, he says, if the lymph is, as is generally believed, some form of a cultivation of the tubercle bacillus from which the bacilli are removed, there might be other ways of explaining these symptoms, which were, to say the least, very important.

The influence of injections on the tubercle bacilli in the sputum, was, as far as Dr. Williams could gather from the records, not very marked.

Two *post-mortem* examinations on cases dying of phthisis in the Charité Hospital, which had been submitted to the treatment, and had received several injections, showed in one case cavities of considerable size, and in the other a cavity at one apex, pneumonia at the base, with a large eruption of recently-formed tubercle. In neither case was there any sign of cicatrization or fibrosis, nor of more necrosed masses than are usually to be found in similar cases.

The great portion of consumptives under the treatment appear to lose weight rather than gain, presumably on account of the fever reaction; the cough and expectoration seem lessened, but no solid improvement appears to be gained; this, however, only applies to the patients who have been under the treatment two or three weeks, which is the case of the majority.

A few old cases from Professor Fraentzel's clinic, and some which have been in Dr. Levy's, and are now in the Moabit Städtliches Krankenhaus give better results. He speaks of eight cases, which, with a few in Professor Ewald's clinic, were all he could collect as examples of genuine improvement under the Koch treatment, out of about one hundred examined by him. The improvement, though striking, he says, was not more than is met with in the wards of the Brompton and other consumption hospitals under the ordinary conditions of diet and treatment, and he adds that they would not for an instant compare with the results obtained at the high altitude sanitoria, such as Davos, St. Moritz or Colorado, where the restoration to health is often complete, and no physical signs or tubercle bacilli remain.

Dr. Williams thinks that the Koch treatment is worthy of a careful and prolonged trial in proper sanatoria, with the addition of pure air and good food and careful nursing. In conclusion he says: "We owe much to Professor Koch, and it is only due to the great services which he has rendered to medicine that his treatment of phthisis should have a fair, full and impartial trial; and this will be easier and more willingly undertaken when he has imparted to all scientific workers the complete details for preparing the lymph."

Notes and Comments.

Treatment of Phthisis.

Dr. Heneage Gibbes has an interesting paper on the question of the unity of phthisis in the *Boston Medical and Surgical Journal*, December 25, 1890. In this he says: I presume no one will doubt that Dr. Koch has entire belief in the unity of phthisis and its bacillary origin. It is, therefore, with some surprise that we read the statement that his lymph does not kill the tubercle bacilli but the tuberculous tissue, that it can influence living tuberculous tissue only, and has no effect on dead tissue, as, for instance, necrotic cheesy masses. This at once removes from its action all cases of pulmonary phthisis, and leaves only tuberculosis to be acted upon.

As I have already pointed out, we have in tubercular tissue a new formation of low vitality, which is shown by its proneness to break-down. We have a somewhat similar tissue in the lesions of syphilis; and we know that under the influence of certain drugs, these lesions will soften and caseate. But the tissue found in syphilis is of a much softer, less organized, and more unstable character than that found in tuberculosis. Koch's remedy is said always to cause a feverish reaction accompanied with rigors, when inoculated in a patient, the subject of tubercu-

losis ; and this symptom is absent when the case is one of syphilis, cancer, or any other disease. The most marked success so far, seems to have been obtained in cases of lupus, and here the parts affected showed a reaction to the remedy by becoming red and swollen. Whatever may be the future of Koch's cure, one thing seems to be certain, and that is it will not help cases of pulmonary phthisis. This will necessitate our making a careful diagnosis in every case, as fortunately we are able to cure pulmonary phthisis in the early stages by ordinary remedies, and, as Dr. McCall Anderson has shown, even cases of galloping consumption, provided they are not tubercular.

One of Koch's statements is difficult to understand ; it is, that his lymph destroys the tubercular tissue in which the tubercle bacilli are situated. Now, given a lung studded with tubercles, all of which are suddenly killed by the action of the curative lymph, it does not seem clear what is to become of the necrosed material. We know that a syphilitic gumma, after it has been destroyed by the action of a drug, will still remain as a foreign body in the part, and set up chronic inflammatory action ; in this manner forming a fibrous capsule and isolating itself from the surrounding healthy tissue. The same thing may be done by a tubercle or a nematode worm. The centre is a mass of caseous material having no structure to show what it originally consisted of ; it becomes, however, completely isolated by a fibrous capsule formed by the chronic irritation of its presence. The central portion may undergo calcification.

If Koch's lymph kills the tubercles in a diseased lung, what change will take place in them? If they are to be softened and absorbed, the place they occupied will be left vacant and the lungs full of holes, as they were formed at the expense of lung tissue. If, on the other hand, they are simply killed, and dry up like a dead gumma, the lung will in time be filled with numbers of small fibro-cystic masses. We need more light upon this subject ; but before all things, it seems to me, we ought to have a clear idea of the actual lesion in the lungs to enable us to appreciate the action of the cure.

It may be of interest to the Society to hear a short account of the work that Dr. Shurly and I have been doing during the last two years on this subject. We came to the conclusion that the lesions in the lungs must be formed by some morbid product circulating in them ; and it seemed to us that the only way, if our views were correct, in which this disease could be checked was by the introduction of some substance which would enter into chemical combination with the morbid product and render it inert. We have never made any attempt to destroy the tubercle bacilli.

It is now more than two years since our first experiments were made, and they have been continued ever since. After trying a number of different substances we found that with iodoform we could entirely check the tubercular process in an inoculated animal. We inoculated monkeys and guinea-pigs with tubercular material ; and we found that those treated with iodoform developed nothing further than an abscess at the seat of inoculation, with numerous tubercle bacilli in the contained pus, while the control animal, in each series, left untreated, invariably died of the disease. But we found that the use of iodoform brought on fatty changes in the liver, of a peculiar character, consisting of an infiltration in patches and not like that found in ordinary fatty liver. These patches were not confined to one or more lobules ; but at the edge of the patch, in many cases, only a part of a lobule was changed.

While Dr. Shurly was treating the inoculated animals with various drugs, I made a series of experiments on pure cultures of the tubercle bacilli ; and I found a number of drugs which would render them inert, as far as their power of producing artificial tuberculosis was concerned. Among these, chloride of gold and sodium exerted a marked influence when used in very small quantities ; and Dr. Shurly will tell you what a striking effect it has when used on cases of consumption. As soon as we found that we could prevent the development of the disease in inoculated animals, Dr. Shurly directed all his attention to finding a substance which could be used on human patients without deleterious effects ; and I investigated the results of the various inoculations with a view to proving that tuberculosis and pulmonary phthisis reproduced themselves in a different manner in susceptible animals. In both these lines I think we have been successful, although it will require further investigation before we can consider the matter definitely proved.

I should like to call attention to the effect of Dr. Shurly's treatment upon the sputum of the patients. He has kept me

regularly supplied with sputum from all cases under treatment; and I have found that those cases treated with substances that produced a marked amelioration of the disease had little or no effect when inoculated in animals. I have a number of guinea-pigs inoculated with sputum from undoubted cases of consumption; and these guinea-pigs are now none the worse for the operation, which was done some months ago.

That a marked change has taken place in these consumptive cases is shown by the total disappearance of bacilli in most of them.

Experiments in Regard to Rabies.

Protopopoff states, in an article in the *Zeitschrift für Heilkunde*, of which an abstract is given in the *Centralblatt für Chirurgie*, October 18, 1890, that, apart from the now disproved theory of phagocytosis, there are two opposing explanations of immunity, the exhaustion theory, and the antidote theory. Protopopoff acknowledges himself to be an adherent of the latter theory, for which he brings new proof in his experiments. Before giving the results of his own experiments, he presents a thorough historical review of the development of the question, which is in the main a review of the works of the French authors, Pasteur and Toussaint, but especially of Chauveau—the first defender of the antidote theory—Roux and Chamberland, Chantemesse and Widal.

Protopopoff's experiments, conducted during the last two years, were undertaken for the purpose of investigating whether or not protection against Pasteur's disease (experimental rabies) depends exclusively upon the action of Pasteur's so-called vaccine material, or virus, and therefore upon purely chemical changes. Pasteur has assumed for immunity against rabies that in protective inoculation, together with the microbes a special substance (vaccine) passes into the body, and that under certain circumstances this opposes the outbreak of the disease.

Protopopoff, took the spinal cords of animals which had died of rabies, and removed from it the fixed virus by sterilization. He found that placing such cords in glycerine bouillon at a temperature of from 65° to 68° Fahr., for from fifteen to twenty days, accomplished this purpose, and that an emulsion prepared with spinal cords treated in this way can be used as a sterilized culture of the virus.

In his confidence in glycerine he is in direct opposition to Gibier, the most conspicuous disciple of Pasteur in this country. But as Protopopoff is an extremely careful and trustworthy investigator, it may be assumed that he is correct in what he says.

A series of further experiments and control experiments by Protopopoff showed that immunity against experimental rabies could be secured by inoculating animals with the non-poisonous emulsion just described. Out of nineteen dogs protected by inoculation with Protopopoff's sterilized virus, fourteen were proof against the usual effects of inoculation with the virus of Pasteur's disease—so-called rabies; while every one of the fourteen animals used for control experiment—that is, inoculation with virus of Pasteur's disease, without previous protective inoculation—died.

Protopopoff further suggests that the outbreak of experimental rabies can be prevented in cases in which infection has occurred before inoculation.

Death in a Dentist's Chair from Cocaine Injections.

The *Journal für Zahnheilkunde*, Sept. 25, 1890, reports a case of death in a dentist's chair from injections of cocaine into the gum, given for the purpose of inducing anæsthesia for the extraction of roots of teeth. The patient was a woman, twenty-nine years old, apparently perfectly healthy but very nervous. The extraction was painless, and nothing abnormal was noted. The operator withdrew from the patient's chair to get some water for the patient to rinse her mouth with, and on his return found her motionless. Physicians were summoned and artificial respiration was practiced, but without success. The autopsy disclosed the fact that three injections had been given, which served for the extraction of three roots. The quantity of cocaine in each injection was two centigrams, or one-third of a grain. The *Journal*, after commenting upon the dangers of cocaine, refers to nine cases of fatal poisoning reported by Dufournier, in the *Archives générales de Médecine*. One of these cases, however, is doubtful, as the patient took a mixture of chloral and cocaine. None of them happened to dentists, and the *Journal* thinks the case it reports the only fatal one occurring in the practice of a dentist. This may be true,

but serious and well-nigh fatal cases undoubtedly have occurred. The *British Medical Journal,* Feb. 9, 1889, p. 311, refers to one in which one grain and a third of cocaine was used.

To show how uncertain the action of cocaine may be, a case may be mentioned in which one-seventh of a grain injected into the eyelid produced very serious poisoning. The case is reported by the *British Medical Journal,* in the article already referred to. It would appear not to be safe to inject a larger quantity than one-half or three-fourths of a grain, especially into very vascular tissues, from which absorption is likely to be rapid and the consequent danger of a maximum effect upon the heart is greatest.

Tiliacin.

The *Druggists' Circular,* December, 1890, says that the isolation from the leaves of the lime tree of a new glucoside, to which the name tiliacin has been given, is announced by Professor Latschinow (*Chem. Zeitschrift*). It is described as splitting up into glucose and tiliaretin, which again decomposes into anisic acid and other products. The leaves of *Cirsium arvense* appear to contain the same glucoside, whilst a glucoside from the leaves of *Phlox paniculata* appears to differ from both tiliacin and hesperidin.

State Medical Society of New York.

The eighty-fifth annual meeting of the Medical Society of the State of New York, will be held February 3–5, in the City Hall at Albany. The following scientific business is announced.

For Tuesday, February 3, the President's Inaugural Address, and papers on Railroad Surgery, by Clinton B. Herrick, Troy; Report of Cases of Injury to the Knee Joint, with Remarks, by Henry Flood, Elmira; Management of Sinuses in Chronic Bone and Joint Diseases, by V. P. Gibney, New York; Necrosis of the Ribs, Complicating Pott's Disease, by Louis A. Weigel, Rochester; Brief Notes on Gastrostomy, with Report of a Successful Case, by Charles A. Powers, New York; The Action of Trypsin, Pancreatin, and Pepsin, upon Sloughs, Coagula and Muco-pus, by Robert T. Morris, New York; Operative Procedures in Acute General Suppurative Peritonitis, by W. E. B. Davis, Birmingham, Ala.; The Progress of Cystoscopy in the last three years, by Willy Meyer, New York; A Plea for Rapid Dilatation, Holt's Operation, in the Treatment of Urethral Stricture, by F. R. Sturgis, New York; A Case of Imperforate Anus of eight weeks standing, Operation and Recovery, by Wm. Hailes, Jr., Albany; Diagnostic Significance of the State of the Pupils, by E. C. Spitzka, New York; Three Diagnostic Symptoms of Melancholia, Second Communication, by Landon Carter Gray, New York; Hysterical Manifestations Due to Alcoholism, by H. C. Coe, New York; Cases of Traumatic Hysteria, by Henry Hun, Albany; Insomnia and its Treatment, by E. N. Brush, Philadelphia; Causes of Asthenopia, by D. B. St. John Roosa, New York; Treatment of Detachment of the Retina, by David Webster, New York; Use of Platinum Instruments in the Extraction of Cataract and in Other Operations upon the Eye, by E. Gruening, New York; Contagion from Roller Towels, by Lucien Howe, Buffalo; One Thousand Cases of Ocular Headache and the different States of Refraction connected therewith, by W. F. Mittendorf, New York; Catarrh and its Cure, by O. B. Douglas, New York; On the Causes of Eczema, by L. Duncan Bulkley, New York; Points in the Pathogenesis of Aural Vertigo, by Oren D. Pomeroy, New York; Certain Hygienic Measures in the Treatment of Catarrhal Affections of the Upper Air Passages, by F. H. Bosworth, New York; Contribution to the Surgical Treatment of Jacksonian Epilepsy, Excision of the Arm Centre, by Edward B. Angell, Rochester.

In the evening there will be a discussion on Appendicitis, the subject being divided as follows: Pathology of Appendicitis, by Herman Mynter, Buffalo, and Arpad G. Gerster, New York; Indications for Early Laparotomy in Appendicitis, by Charles McBurney, New York, and William W. Keen, Philadelphia; Technique of Operative Interference in Appendicitis, by Lewis A. Stimson, New York, and George Ryerson Fowler, Brooklyn; Propriety of and Indications for Resection of the Appendix Vermiformis during the Quiescent Stage of Chronic Relapsing Appendicitis, by Joseph Price, Philadelphia, and Robert F. Weir, New York; Relation of the Physician and the Surgeon in the Care of Cases of Appendicitis, by Albert Vander Veer, Albany.

On Wednesday morning there will be a

discussion on Pelvic Inflammation in Women; its Pathology and its Palliative, Conservative and Radical Treatment, arranged as follows, Introduction, by Andrew F. Currier, New York; Pathology, by A. J. C. Skene, Brooklyn, and W. Gill Wylie, New York; Palliative Treatment, by C. C. Lee, New York; Conservative Treatment, by W. M. Polk, New York; Radical Treatment, by Joseph Price, Philadelphia, and L. S. McMurtry, Louisville, Ky.

These papers will be discussed by Dr. Thomas Addis Emmet, of New York, Dr. Franklin Townsend, of Albany, and others.

After this papers are announced on Treatment of Posterior Displacements by the Utero-Vaginal Ligature, by H. J. Boldt, New York; Minor Gynecological Surgery, by Maurice J. Lewi, Albany; Treatment of Injuries to the Floor of the Vagina, by Horace Tracy Hanks, New York; An Inquiry into our present knowledge of the Progress of Myomatous Tumors after (a) the use of the Electric Current, (b) Removal of Ovaries and Tubes, (c) The Old Method of Treatment by Rest, Intra-uterine Application and Ergot, by James F. W. Ross, Toronto; My Experience with the Surgical Treatment of Retroflexion and Prolapsus Uteri, by Paul F. Munde, New York; Surgical Treatment of Ectopic Gestation, by Charles A. L. Reed, Cincinnati, Ohio; Some of the Results of Defective Sanitary Arrangements in the Puerperal State, by James P. Boyd, Albany; Management of Tedious Labor, by Egbert H. Grandin, New York; Report of Four Cases of Cancer of the Clitoris where Clitoridectomy was performed, by Franklin Townsend, Jr., Albany; Emotional Element; the Puerperal Period, by Adam H. Wright, Toronto.

On Wednesday afternoon, there will be a discussion on Pulmonary Tuberculosis, as follows: History, by H. R. Hopkins, Buffalo; Etiology and Pathology, by Heneage Gibbes, Ann Arbor, Mich.; Diagnosis and Prognosis, by A. L. Loomis, New York; Manifestation in Upper Air Tract and Special Treatment thereof, by John O. Roe, Rochester; Treatment, including Propylaxis, as related to Climate, by Samuel B. Ward, Albany; Treatment as related to Therapeutics, including Koch's method, by E. L. Shurley, Detroit.

Papers will be read on Koch's Lymph and Tuberculosis, by A. Jacobi, New York; Therapeutical Notes on Acute Respiratory Diseases, by A. Jacobi, New York; Lobar Pneumonia, with the Production of Connective Tissue in the Air Spaces, by Francis Delafield, New York; The Treatment of Gall Stones, by William Wotkyns Seymour, Troy; Treatment of Itching, by Edward B. Bronson, New York; Croupous Rhinitis, by Frank H. Potter, Buffalo; Correction of Angular Deformities of the Nose by a Subcutaneous Operation, by John O. Roe, Rochester; Case of Pemphigus, by H. R. Hopkins, Buffalo; Treatment of Pigmentary and Vascular Nævi, by George Henry Fox, New York.

On Wednesday evening the Anniversary Address will be delivered by the President, and this will be followed by the Annual Dinner of the Society, at 9,30 o'clock.

On Thursday morning papers will be read on The Relation of Physicians to Boards of Health, by Lewis Balch, Albany; Necessity of an Amendment in the Laws Governing Medical Evidence in Malpractice Suits, by R. J. Wilding, Malone; Present Status of the proposed Law to regulate the Practice of Embalming human dead Bodies, by A. Walter Suiter, Herkimer; Unrestricted Evil of Prostitution, by Andrew F. Currier, New York; Case of Scarlet Fever with Vesicular Eruption, by F. C. Curtis, Albany; Intestinal Obstruction; Report of Cases, by J. H. Glass, Utica; Subject to be announced, by William S. Ely, Rochester; Subject to be announced, by Clarence C. Rice, New York.

Information in regard to the meeting may be obtained of the Secretary, Dr. Frederick C. Curtis, Albany, New York.

American Electro-therapeutic Association.

A convention of American physicians interested in electro-therapeutics has been called to meet at the Academy of Medicine, No. 17 West 43d St., New York, on January 22, 1891, at 11 A. M., for the purpose of organizing an American Electro-therapeutic Association. The call is signed by Drs. G. Betton Massey, Augustin H. Goelet and Horatio R. Bigelow.

NEWS.

—Dr. Myron Knowlton, of Rochester, N. Y., died at the age of 84 years, December 30, 1890.

—Dr. B. S. Warren, aged 65, a promi-

nent physician of Concord, N. H., dropped dead of heart disease, January 1, 1891.

—Dr. Wellington V. Walker, formerly on the staff of the City Hospital of Louisville, Ky., died suddenly at Mexico, Mo., in December.

—Dr. F. W. Dancy, a prominent physician, and President of the State Board of Health of Mississippi, died at his home in Holly Springs, Miss., on November 8, 1890.

—Dr. Frederick T. Outley, a rising young physician of St. Louis, and who spent some years in the service of the city Health Department in the capacity of quarantine physician, died December 28, 1890.

—Dr. Anson L. Hobart, for 32 years a practicing physician in Worcester, Mass., died December 31, 1890, 76 years old. He was a native of Columbia, N. H., and a graduate of Williams College, class of 1836.

—Dr. Elisha Sterling, of Cleveland, died in that city December 29, 1890, after a short illness. He was born at Palisbury, Conn., in 1825, and was brought when a child to Cleveland, when it was a backwoods settlement. He was an ardent student of fish culture, as well as an able surgeon.

—The hospital in Brooklyn conducted by Dr. Mary Dixon-Jones and her son—who were not long ago held for manslaughter—has been criticised again because of alleged false statements to the Brooklyn Board of Estimate, to which it was making application for an appropriation from public funds.

—Dr. McDaniel Purcell died recently in this city in his thirty-second year. He was graduated from the medical department of the University of Pennsylvania about eight years ago. He had been in ill health for several years, but his last illness lasted but two weeks. He was a native of Richmond, Va., and his body was taken there for burial.

—The Imperial authorities of Russia have invited Sir Joseph Lister, Dr. Koch and Professor Pasteur to a conference, with a view to founding and establishing a bacteriological institute at St. Petersburg. Sir Joseph Lister was unable to accept the invitation, and Mr. Watson Cheyne recently left London to take his place as the English representative.

—Passed Assistant Surgeon Kinyoun, of the Marine Hospital service, who was recently sent by the Marine Hospital Bureau to Berlin to enter Koch's laboratory, reported by cable, on January 7, his arrival and asked for authority to purchase the necessary apparatus. The authority was immediately granted. Dr. Kinyoun will remain in the laboratory three months.

—Eight patients are being treated in the New York Post-Graduate Hospital by Koch's lymph. Three of them are cases of lupus; four are cases of phthisis pulmonaris, and one laryngeal tuberculosis. The inoculations are in charge of Dr. W. C. Bailey, who was for a long time a student in Koch's laboratory, assisted by the Director of the Laboratory, Dr. J. H. Linsley.

—The comparatively rare accident of fracture of a rib by muscular action took place in Philadelphia, January 7, 1891. A woman, fifty-nine years old, had gone into a shoe store to purchase a pair of shoes. After trying them on she stooped over to button them, when she heard something snap, and at the same time experienced a stinging sensation in her side. As the pain continued to grow greater she went to the Episcopal Hospital, where Dr. Boger, upon examination, found that one of her ribs was broken.

—Dr. Gideon B. Perry, one of the oldest practicing physicians in Brooklyn, died suddenly December 30, 1890, at his residence, 627 Bedford avenue. He was born at Hopkinton, R. I., in 1826. He first studied medicine under his father, who was a medical practitioner in the town in question. Later he assisted Dr. Alonzo Clark, of Pittsfield, Mass. He next entered the medical department at the University of the City of New York, graduating therefrom in 1851. In the same year he established himself in practice in Brooklyn, and from that time up to the moment of his death had pursued a professional career of singular activity and success.

—The first of the proposed "Leprosoria" in the Baltic provinces will, it is hoped, be ready for occupation in the spring. A valuable piece of land having been presented for the purpose by the landowners at Nennal, a village seventy versts distant from Dorpat, it is proposed to locate upon this forty or fifty lepers who are still able to work. A small branch establishment, or hospital, for severe cases—especially such as require operative measures—is to be established in the immediate vicinity of Dorpat. This hospital will contain ten or fifteen beds. It will be employed also as an observation station, where patients may be kept before being sent on to Nennal.

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Clinical Lecture.

RHEUMATOID ARTHRITIS.—SYPHILITIC HEADACHE.—MALARIAL CACHEXIA.—DIVISIONS OF THE ANEMIAS.

BY JOHN H. MUSSER, M. D.,

ASSISTANT PROFESSOR OF CLINICAL MEDICINE, UNIVERSITY OF PENNSYLVANIA; VISITING PHYSICIAN TO THE PHILADELPHIA HOSPITAL.

Rheumatoid Arthritis.

Gentlemen: At our last meeting we studied the symptoms, course and treatment of syphilitic, gonorrhœal and simple rheumatism; to-day we will take up a disease which occupies an uncertain position in the nosology of this broad subject. The exact relationship existing between rheumatism and rheumatoid arthritis has not been determined; yet there can be no doubt that it is definite and certain. Rheumatoid arthritis is a disease associated with grave anatomical changes, which appears in gouty subjects, with other affections known to be rheumatic, frequently mingled with other well recognized gouty or rheumatic symptoms. It is also occasionally associated with lesions common in other rheumatic affections, chronic kidney trouble, endocardial inflammations, etc. In syphilitic rheumatism the enlarged lymph glands facilitate diagnosis; not so much the glands in the groin—which are apt to enlarge on any adjacent irritation—as the post-cervical or epitrochlear glands. If these are swollen, it is an important aid to diagnosis. In gonorrhœal rheumatism there is an effusion into the joint of a thick, cloudy, serous exudation, which is not pus, nor yet serum. In rhematoid arthritis every component part of the articulation shows symptoms of chronic inflammatory change. There is the curious contraction, the character of which I am unable to describe; the position and shapes of the joints are altered; new growths of bone appear around the heads of the small bones—for the smaller joints are the ones generally affected; the articular cartilage is absorbed; masses of hypertrophied cartilage appear in the synovial processes; the articular cartilages relax, and displacements and sub-luxations of the unshapely bones occur. Crepitus can be detected, until the process is so far advanced that immobility exists.

In the case before us, which was sent to us as a true example of this disease, there is no bony enlargement, no crepitus on movement, no sub-luxations, no disorganization of the heads of the bones. It is rather a case of chronic rheumatism with contractures than a good specimen of rheumatoid arthritis.

Syphilitic Headache.

The next patient is a man, aged 30, whose habits are fair; he is a tobacco user and a moderate beer drinker; he has no especial family history. He is said to have had malaria in Italy thirteen years ago. On the fifth of August he noticed a chancre; this was followed by no secondary symptoms. On the morning of September 17 he awakened with pain in the leg. This pain spread to the lumbar region, and subsequently to the occipital region. It was throbbing in nature, worse on movement and at night. On admission he had no fever, but on having his temperature taken for the past two days, we found that it ranged from 100° to 100⅘°. All this time, despite the use of anodyne and other remedial measures, his condition grew worse. He was unable to sleep and his general health was beginning to suffer. The possibility of the existence of headache due to disease in other organs—the so-called secondary headaches—led to a careful study of this man's condition. There was present no gastric or intestinal disturbance which

would account for the symptom. His heart, liver and kidneys were in good order. The possibility of toxic headache being the real condition then suggested itself. Malaria, lead-poisoning, rheumatism, syphilis, the early stages of the fevers—especially typhoid—are all frequent sources of this troublesome symptom. There is an old history of malaria, thirteen years ago; there have certainly been rheumatic pains throughout the body; and he has had the primary lesion of syphilis. Rest in bed, with warmth and diet, have brought relief from the pains in the body of which he complained on his admission. They were undoubtedly distinct from his headache. The pain in his head is localized in the occipital region; it is acute, and the spot is tender to the touch. There is no trace of any malarial poisoning; the spleen is not enlarged; there is no cachexia or pigmentation; the blood is in good condition; the man has been in the hospital too long to think of the existence of any of the specific fevers; and no trace of lead-poisoning exists. In obscure cases there can be found frequently traces of trouble which point towards rheumatism; the family history, the occupation, the large quantity of uric-acid crystals in the deposits, high color of the urine, or high specific gravity, are all suggestive of rheumatic involvement.

From the study of the case, we determined that anti-syphilitic remedies should be tried. This early in the course of syphilis, the use of mercurials with the iodide of potassium is indicated. This treatment has been tried for a few days with the result that the man has had two fair nights, when he experienced sufficient relief from his pain to obtain considerable sleep.

Malarial Cachexia.

The next patient exhibits such a degree of pallor that we can at once decide that some grave change must have taken place in the economy. It is difficult sometimes to distinguish jaundice from anemia, which tends towards sallowness. The patient, a man aged 52, was born in North Carolina, and was a resident of that State until within a few months. He is a laborer, one of that class which fills this hospital almost exclusively. He has used alcohol moderately, tobacco not at all; which is somewhat remarkable for a native of a tobacco-growing State. He confesses to no venereal diseases. His family history is exceptionally good; no history of hereditary disease exists. Of course he has been for years a constant sufferer from malaria. He has lived for many years in the swamps of North Carolina, where this disease is indigenous. Although living among the so-called "dirt-eaters"—people of the region who have that unpleasant symptom "pica," or a gnawing desire for unnatural and unsuitable food—he is not one of them. In July of this year he suffered with chills every day; at this time he was taking quinine just as we would take our daily bread. Under this extreme dosing the chills appeared only every third day. Suddenly, four weeks ago, these chills began again every day, each day one-half hour later. On admission the man was weak, exhausted and breathless. Early the next morning after admission he had a chill, when his temperature went up to 104°; later descending to normal. The next two days he had no chill; although on the second day his temperature ran up to 103°, followed by a profuse perspiration. His color is striking; it is a lemon-yellow, with the sclerotic and mucous membrane of the conjunctivæ blanched. All the evidences of anemia exist; there are murmurs in the vessels and heart, indicative of the poverty of the blood.

In this case there have been found none of the characteristics of malarial poisoning; the pigment, floating free or confined in the corpuscles, is wanting. There are, however, organic changes which show the influence of long-continued malarial action. The spleen is greatly enlarged. Normally it extends from the eighth to the tenth rib anteriorly in the mid-axillary line. In this man it extends from the seventh rib to a point nearly in a line with the umbilicus. It is firm, hard, smooth and painless. The location of the long axis of splenic dulness, running from the axilla across towards the umbilicus, making an acute angle to the axillary line is diagnostic of enlargement of this organ. The suggestion that this man's trouble is due to leucocythemia must not be overlooked. The examination of the blood disproves this possibility. That this is not that form of pseudo-leucemia known as Hodgkin's disease, will be shown presently, in summarizing the forms of anemia. Arsenic and not quinine is indicated in such a case.

The study of the causes, diagnosis and course of the various forms of anemia is most interesting and important. In the

first place, in the consideration of symptoms common to all forms of anemia, is the study of pallor. Pallor, while a useful aid in diagnosis is not an unvarying sign of anemia. We can have considerable pallor in the patient, when the examination of the blood reveals the fact that it is normal in quality and quantity. Of the other symptoms, shortness of breath and rapidity of the heart's action are due to the lack of perfect oxygenation; especially is this true when the corpuscles, which are the oxygen carriers, are diminished in number or power. The coolness of the extremities is due to a similar cause; the giddiness to lack of proper nutrition of the brain. In the classification of the divisions of anemias, great confusion still exists. First, they are divided into two great classes: primary and secondary; the primary are those which exist at once, and are due to disturbance in the blood-making organs; the second follow the action of organic disease. A far better division of these anemias is into idiopathic and symptomatic; the idiopathic arising from the blood-making organs; the symptomatic being indicative of disease elsewhere.

Anemia is the want of blood; its diminution in quality or quantity. The constituents of the blood are so altered that it cannot perform its proper physiological functions. Symptomatic anemia appears in the course of such diseases as phthisis, interstitial nephritis, wasting due to starvation, etc. In phthisis it is true that there is some direct loss of material in the discharges; in interstitial nephritis there is some loss of blood in the albumin carried off in the urine; still the great source of anemia is in the disease itself. There is always defective assimilation and nutrition. In the toxemias there is symptomatic anemia, due directly to the destruction of the blood; such forms are seen in syphilitic, malarial, mercurial, arsenical and lead poisoning. In the other great division—the idiopathic anemias, there is definite change in the blood itself; associated with actual destruction of the corpuscles or with such change as prevents their production, hemolysis (?) or hemogenesis. The three great divisions of idiopathic anemias are chlorosis, pernicious anemia and the cytogenetic anemias. This latter form is divided into leucocytic and non-leucocytic, that is pertaining to the formation of leucocytes.

The distinction between symptomatic and idiopathic forms is as follows. There is some reduction in the number of red corpuscles in symptomatic anemia; the hemoglobin is not markedly reduced—the degree depending on the amount of red cells missing. There is no change in the character of the blood; no elements are gone, and no new ones are introduced. In idiopathic anemia there is definite change in the blood; there is diminution in the number of red corpuscles; in some forms there is increase in the number of white cells. There is diminution in the richness of the hemoglobin. Then the corpuscles change in appearance; instead of the red corpuscles being round, they are all sorts of shapes: larger, smaller, club-shaped, etc., forming the so-called Eichorst corpuscle. There is a change in the power of the red corpuscle to carry oxygen. The symptoms are the same as seen in symptomatic forms, differing only in degree.

In chlorosis, the number of cells remain about the same, there being a fall in the amount of hemoglobin, detected by the use of the hemoglobinometer. The use of such instruments of precision is essential in formulating a diagnosis; it is required for the definite discovery of the existence of chlorosis. In pernicious anemia, there is marked diminution in the number of red cells; these running down, in one report, as low as 143,000 to the cubic millimeter; 500,000 is a common count. The change in shape, size and form is more apparent.

The names of "progressive" and "pernicious" applied to this form of anemia are misleading. The disease is not always progressive, being occasionally intermittent, and patients sometimes recover. As more peculiar to this anemia are seen small, spherical corpuscles, Eichorst's being almost pathognomonic of this trouble. Nucleated red cells are also common. There are more marked clinical features than in chlorosis; the pallor is different in hue, yellowish, more suggestive of jaundice. There are some anatomical changes due to the anemia. Degeneration of the blood-vessel walls occurs; their tone is lost; a fatty degeneration of the intima occurs; subcutaneous or submucous hemorrhage follows. This is especially well seen on examining the eye-ground in the retina. With the hemoglobinometer an increase in the richness of the hemoglobin is found, despite the intense diminution in the number of red cells. This is a most striking difference between chlorosis and pernicious anemia.

In the third class, cytogenetic anemia,

we have the leucocytic and non-leucocytic. The leucocytic is further divided into the splenic, medullary and lymphatic. The principal anemia among the non-leucocytic is the so-called "Hodgkin's Disease." Here there is a hyperplastic enlargement of the lymph glands with the development of anemia.

Based on the combination of pathological, clinical and physiological research, Hunter, in London, has made a number of remarkable observations. This observer was anxious to determine the exact position of pernicious anemia. He found in the urine marked characteristics: a great destruction of the red cells producing a high color without alteration in the specific gravity. The spectroscopic and chemical examination revealed the fact that this pigment came from the disintegrated blood. There was found a great increase of iron in the liver, while there was less iron in the other organs. Normally there is a definite relation between the quantities of iron in the various organs. In malaria, pigment is deposited in the cells of the intima, along the course of the blood-vessels. In progressive pernicious anemia, it is deposited—not in the capillaries but in the liver-cells. It was thought at first that the liver took up the corpuscles themselves; but later it was proved that the liver-cells take up the pigment directly from the portal vessels. This condition is associated with carcinoma of the stomach, chronic gastritis, atrophy of the peptic glands, and other gastric and intestinal trouble. The reason for this is the development of specific ptomaines in the intestinal canal, due to the presence of parasites in this canal. Their destruction should take place in the portal circulation, depositing the iron in the liver. The injection of certain chemical substances into the blood will produce the same conditions artificially. In one sense this idiopathic disease is secondary to this process.

In the condition called paroxysmal hemoglobinuria, there is destruction of the blood with its appearance in the urine; with this may be associated intense anemia. Hunter found that these changes occurred in the general circulation, while in pernicious anemia, as we have seen, they are limited to the portal circulation.

—Lycopodium sprinkled on oiled silk prevents the fabric from adhering.

COMMUNICATIONS.

GENERAL CONSIDERATIONS ON THE FEVERS OF THE SOUTH.[1]

BY GEORGE DOCK, M. D.,
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The study of the fevers of the South justly occupies a prominent place in the medical mind to-day. In every society meeting papers are read and discussions held; in almost every journal articles are published bearing on this theme. Everywhere there is great zeal, often close observation and learned reasoning. Yet it must be confessed, after a careful review of the subject, that no advance is made in the accurate knowledge of these diseases. But little is added to what we have long known of the nosology of the special fevers as they occur in our latitude, and no progress is made in clearing up the unsettled points regarding the anomalous or unclassified forms. In every meeting statements concerning even fundamental matters are met by counter statements; in almost every paper old hobbies are urged forward by vigorous hands, often, it seems, "with more desire for victory than for truth." Yet how seldom do we see the complete clinical history of a case, or an analysis of cases; how seldom a temperature curve; how seldom—nay, when do we see the account of an autopsy?

It seems, then, in order to secure better results, we must follow different lines, and in order to know more clearly what these shall be it is necessary to recognize and avoid the errors and short-comings of the past. The most important of these I believe to be the following:

1. Neglect to recognize and follow the general principles lying at the basis of the classification of fevers, and often the first principles of pathological anatomy and etiology.

2. Arbitrary or individual views of special morbid processes and a refusal to accept, for the purpose of organized work, the existence of certain conventional types.

3. A want of objective study, leading to inaccurate observation of cases and loose or general statements concerning them.

[1] Read at the meeting of the North Texas Medical Association, held at Sherman, Texas, December, 1890.

4. An entire absence of anatomical basis for theories or arguments advanced.

5. A tendency to apply novel and often unfounded theories of pathology or therapeutics to the subject.

Examples of each of these errors could be quoted from recent literature, but may with propriety be omitted.

In considering them in detail, we find a common example of the first kind exhibited by a perversion or confusion of certain technical terms, continued and remittent—terms of no value in the ultimate classification of fevers, but very useful clinically. This trait is due partly to an attempt, misguided, I believe, to do away with the distinction of meaning which the two terms should convey. That distinction was made long ago, but before the days of medical thermometry could not always be observed in practice—an objection not valid to-day, when the thermometer is consulted as regularly as the tongue. It is urged with some ingenuity that, as all remittent fevers are continued, in the sense of having no stage of apyrexia, one of the two words is superfluous. But one of the commonest kinds of remittent fever, the malarial remittent, is etiologically nearly related to the most common and characteristic intermittent, while the existence of fevers properly called continued cannot be denied. Now, as the question, whether the malarial fevers ever follow a continued course (in the narrow sense) has not yet been answered in the affirmative, there is great reason why both terms should not only be used, but be used with extreme care for accuracy, following the usage of correct writers. According to this a continued fever is one in which, during a part at least of the disease, the febrile temperature pursues a course modified only by such variations as occur in the normal condition—that is, a difference of not more than a degree Fahr. between the lowest and highest daily range. Closely related is the sub-continued type, where the variation is greater but not so much as in the remittent, when maximum and minimum differ by more than two degrees, without, however, reaching the normal.

This may seem a matter of subordinate importance. A more serious fault, the evil effects of which are hard to throw off, is a departure from the only safe guides to classification—anatomy and etiology. Hence it is that our fevers have as many names as they have local habitations, many of them unintelligible outside of certain localities. Another misconception of general principles is shown by the argument so often used, that a given disease cannot arise in a certain place on account of the absence of its supposititious causative germ. In the present state of our knowledge of pathogenic organisms, such arguments are of no value whatever.

Under the second heading, we find the neglect or refusal to accept the delineations of disease given by the masters of our art, and tested fully in the clear light of pathological anatomy. This is seen especially in connection with cases of enteric fever, which are so often the subject of needless controversy, on account of false ideas of its natural history.

In the same category belongs a refusal to accept as possible the occurrence of two diseases in an individual at the same time, important here because it leads to an erroneous position towards the compound affection called typho-malarial fever. This curious mental attitude is usually defended by an appeal to the authority of John Hunter and his "principle that no two different fevers can exist in the same constitution, nor two local diseases in the same part, at the same time." From this direct quotation (Palmer's ed., vol. iii, p. 3, *et seq.*) it is a question whether the "principle" would apply to the case in point, for it might be urged with great reason that one of the two diseases takes place especially in the blood, the other in certain organs of the abdomen. But the "principle" itself is so at variance with common observation, and with our present ideas of pathology that it is difficult to see how it can be seriously entertained. As a matter of fact, the mixed infection of enteric and malarial fevers, which was recognized by such unbiased observers as Dickson, Drake, Flint and many others, and worked out so impartially by Woodward, has gone through the final stages in the detection of the morbific germs at the hands of Kinyoun; and the question now is, not whether there is such a combination, but when, where and with what aspects it appears.

It is most unfortunate that the term typho-malarial is applied to a condition entirely distinct from the one just mentioned, viz., when a malarial fever assumes the typhoid condition, the word being used after the analogy of typhoid-pneumonia. When such a use is justified by facts (it has not yet been satisfactorily demonstrated that it ever is)

and the person using it makes his meaning clear, no great harm results, though the practice is not worthy of perpetuation.

Other errors are seen in the use of such terms as "catarrhal fever" for conditions very different from those described under that name in text-books, and often without notable catarrhal symptoms; "bilious fever" when there is no "biliousness," etc. Of course, owing to the difficulties of diagnosis, such terms serve a purpose in intercourse with the laity, but that they should be used in technical articles is a matter of distinct disadvantage.

In discussing the evils resulting from inaccurate observation, I speak with great reluctance. Skepticism of the observations of others, if carried too far, destroys all possibility of united work; and yet a great deal of erroneous observation and still more erroneous deduction takes place. Combined with arbitrary views of special diseases it has been productive of great confusion. As an example of this, the following experience, not by any means unique, may be cited: Some months ago a patient was sent from the interior of Texas to Galveston, with the written diagnosis of "continued malarial fever" from the local physician. This name, not used by systematic writers, is in common use in some parts of the country, and it is maintained by many who use it that such cases are neither malarial proper nor enteric. These cases are comparatively common in the place whence the patient came, so I think we may assume that the one under consideration represented the disease so called. In Galveston, however, the attending physician looked on the case as one of enteric fever, and when the patient died, a few days later, requested me to make an autopsy. At that I found the complete anatomical picture of enteric fever, without a trace of recent or old malarial infection. The specimens are here for your inspection.

This brings up the subject of anatomical investigation, the neglect of which is not altogether owing to prejudice against such practice on the part of the laity. It is an interesting fact that those who most strongly argue for the non-existence of old diseases and the occurrence of novel forms are those who pay least attention to the teachings of anatomy, though it cannot be said they do not have fatal cases in which to study it.

The application of novel theories in pathology do no great harm, but they seem to direct attention from the more tangible parts of the subject.

As intimated by the title, it was the object of this paper to call attention to facts of wide application, rather than to discuss the minutiæ of special pathology and differential diagnosis. Yet there are many things in these latter branches too often neglected in the study of our fevers, especially some aids furnished by modern instruments of research—the microscope in particular.

To sum up in a few words the best means of increasing our knowledge of fevers, I would suggest, in the first place, a familiarity with the classical description of fevers given by clinicians whose experience and judgment make them authorities, controlled and extended by observation at the bedside and the autopsy table under experienced instructors. Next, an objective and critical study of every case of fever, with the assistance of all the methods of exact diagnosis; and a thorough study of every fatal case, with the application of all the modern means of investigating anatomy and etiology. Working on these lines; keeping the anatomical limit where possible, and, where not, preferring rather such non-committal terms as "simple continued" than those expressing supposed etiological or anatomical characters, a comparatively short time would show such progress in diagnosis, with consequent increased certainty in treatment as has not been attained by following subjective methods.

THE CURETTE IN FISTULA IN ANO.[1]

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All patients naturally loathe the idea of a cutting operation, be it ever so slight, and will undergo a great many inconveniences as well as endure an immense amount of suffering, rather than submit to the surgeon's knife. While I would not be understood as belonging to that class of physicians who are slow to use the knife when circumstances demand it, yet in certain cases of fistula in ano I should endeavor to effect a cure with the curette, which in the end is a cutting

[1] Read before the Knox County Medical Society, at Knoxville, Tenn.

operation, as it effects a cure by scraping away the tough and thickened pyogenic membrane, thereby substituting for it a healthy surface which heals readily. Moreover, the term "curette" is better received by the patient, who is ignorant of its real nature. Indeed he will actually regard it with favor, and gladly welcome it as a substitute for the knife.

In offering to the profession this mode of curing fistula in ano, I do not claim for it any superiority over the knife, or that it will ever supersede it (believing, as I do, in cases which will never be cured except by a resort to the knife or ligature); nor do I come with a long list of cases cured by this method; but I present the subject on its merits, hoping that, like "seed sown in good ground," it will find a nidus in a fertile spot, which will give us, at some future time, sufficient data upon which to base an opinion in subsequent cases.

The cases for which I would recommend the curette in the treatment of fistula should, for obvious reasons, be select: such as incipient fistula in ano, or those cases after a resort to the knife in one or more sittings, in which healing has taken place in all portions of the wound except at a small tract no larger than a knitting needle or a crow's quill; or even in cases of fistula with two or more sinuses it might be tried. Again, I think it is applicable in cases in which the fistulous tract shows a tendency to fill up from the bottom, and buoys the hopes of the surgeon to that point where he thinks he can dismiss his patient as cured, but in which he will notice after careful examination the least possible drop of pus at some portion of the cicatrix, and should he attempt to examine it with the probe, will find to his horror that it passes into a cavity of considerable size, which is generally barrel-shaped or fusiform. Here it is that the curette is of especial value, as in the following case, sent me by my esteemed friend, Dr. J. M. Kennedy.

The patient was a negro man, about twenty-two or twenty-four years old, and a laborer, who had been troubled with fistula in ano for two years. On examination, I found a large abscess cavity on the left buttock, with four openings, all discharging a thin offensive fluid, and one sinus extending into the rectum, just within the verge of the anus. On November 14, 1889, in the presence of Dr. Kennedy, I laid open the abscess cavity and all sinuses leading into it, washed it out thoroughly, and packed it with lint. The abscess cavity had a worm-eaten, or honey-comb appearance, and was covered with a thin, dirty-looking exudate. The cut edges of the wound were exceedingly rotten and, on pressure between the fingers, could be readily crushed like a mushroom. I saw the patient each succeeding day for the first week, and then gradually lengthened the number and frequency of my visits, washing out and packing the wound each time I saw him. The wound healed readily except a single fistulous tract, which extended up in the ischio-rectal fossa for about two inches.

On December 20, I again operated, making a complete fistula by pushing the grooved director through the gut into the rectum above the internal sphincter, bringing it out at the anus, and dividing all the tissues on the director; afterwards I stuffed the cavity with lint as in the previous case, after having thoroughly curetted it. This second operation was followed by incontinence of feces and an involuntary escape of flatus, which disappeared however in a few days. The wound healed rapidly, except the fistulous tract, which was unclosed as before the operation.

On March 13, 1890, after having injected a drachm of a saturated tincture of iodine into the fistula, I placed the patient on his feet and let him walk about, he having been in bed for nearly four months. On March 15, I gave another injection of the iodine solution, with negative results. On March 27, I injected a four per cent. solution of cocaine into the fistula, which deadened sensibility completely; then, taking my probe-pointed bistoury, I enlarged the opening leading into the fistula sufficiently to introduce a curette, and having thoroughly scooped it out and irrigated it with simple pure water, I packed the wound with lint. I dressed the wound each succeeding day. On May 3, I repeated this operation, and again on June 2, all the while allowing my patient to go about and do as he pleased. On June 23, after having examined the wound and found it had healed in every part, I dismissed the patient as cured; and he remains well to this day.

The main reason I have for presenting this paper before this Society is to show that, even after one or more cutting operations have failed, or the application of a strong irritant is *nil*, a cure may be obtained by other means than the use of the knife or

an irritant. Again, when, after repeated failures, the surgeon may be unwilling to recommend another formal operation to a doubting patient, and thereby risk establishing incontinence of feces or incurring the reproaches of an ungrateful patient, he may have recourse to the curette; which his patient will readily submit to, more especially, if assured that it will be a painless procedure.

Therefore, after having thoroughly tested the curette, in a case which had not only resisted the knife in two formal sittings and two applications of a strong irritant, but had also tried the souls of both physician and patient, I am persuaded that, in certain select cases, such as incipient and external blind fistula, etc., the curette will in the future be the means of curing a good many fistulas, and will thus deliver our patients from that horror of men—the knife.

DIPHTHERIA.

BY C. W. MUSGROVE, M. D.,
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Diphtheria, in its pathological relations, has been and is still quite complicated in some respects. However, one important factor—the cause—seems to have been settled as being a diphtheritic microbe. But there still remains an important point to be determined. All our leading pathologists agree that two distinct conditions exist: the local and the constitutional, in an individual afflicted with this diphtheritic microbe. But which is primary and which is secondary, is the question that agitates the minds of the pathologists to-day. The opinion of Loeffler on this important question is worthy of serious consideration. He says: "The bacillus is abundant in the pseudo-membrane, but is not found in the blood-vessels, lymphatics or internal organs; so that its pathogenic action must be localized on the surface. If it be the specific principle, it must act by producing a poison where it is localized, which poison causes neurosis and dilatation of the vessels, from which lymph exudes, and entering the lymphatics and circulatory system causes systemic infection." W. Watson Cheyne recognizes the importance of Loeffler's researches and thinks it probable that the micro-organism which causes diphtheria is a bacillus, which, lodging upon the throat, is propagated there. Having upon the mucous surface a favorable nidus for its development, it not only lies upon, but also penetrates the superficial portion of the mucous layer, and causes the exudation of fibrinous material. He furthermore believes it probable that the bacillus produces very poisonous ptomaines, which, entering the circulation, give rise to general systemic infection. That the bacillus is the causative agent of diphtheria is rendered probable, and that systemic infection by the diphtheritic poison is not produced directly by the entrance of the microbe into the circulation, but by ptomaines which spring into existence through the agency of the microbe, is also the opinion of some of the highest authorities in the study of bacteria. It seems to be accepted as a fact that this microbe is capable of setting up a local diphtheritic action in any portion of the body where it finds an inflamed, denuded or cut surface upon which to lodge; also that the microbe requires favorable surroundings for its nidus and propagation. Is it not then probable that this diphtheritic microbe requires the identical material found in the throat; such as saliva, etc., in connection with the results of catarrhal affliction in said region, which are so very prevalent? The principles of medicine teach that, as a rule, two causes are necessary for the production of disease: the predisposing and the exciting cause; also that a resisting force exists in the constitution under peculiar conditions.

Diphtheria is classified as an extremely contagious disease; however we frequently find persons fully exposed to its morbid influence who escape its evil effects entirely. On the other hand, we find persons only slightly exposed, who become victims of the disease in its most severe form. In such instances we have a complete manifestation of a resisting force, and the predisposing and exciting causes displayed; now if this resisting force did not exist in the individual, all persons exposed would be sure victims of the disease. This of course applies not only to diphtheria, but to all contagious, and even to other diseases. In diphtheria we find the constitutional, and local condition markedly distinct; so much so, that a person may have the disease locally, beyond doubt, with the constitution but slightly affected. We know, futhermore, that diphtheria never exists as a constitutional disease unless the local disease is present.

But that the local disease can exist with-

out affecting the constitution, but very slightly, we also know. In no contagious disease do we have the same opportunities for observing and comparing local morbid conditions with the constitutional condition, as in diphtheria. Membraneous croup does not present the same opportunity, for the reason that the local condition is more out of sight. It is true that the local predisposing cause is present in the throat, but the constitutional effect is that which is produced by any interruption in the function of the lungs, while in diphtheria we have the neurasthenic condition to contend with in the general system. In other diseases we have the predisposing cause in the individual for the exciting cause to act upon. But when such is the case, if is from the fact that the constitution is rendered vulnerable by some abnormal condition existing in the blood or organs, this producing the predisposing cause. In diphtheria we may have the predisposed cause in the throat as a local catarrhal inflammation or even a denuded surface. It is fully accepted as a fact that the diphtheria microbe will attach itself to a denuded surface in any part of the body, and the throat being subject to slight catarrhal inflammations at least two-thirds of the time, the throat is a most suitable nidus for the diphtheritic microbe, and it is in the throat that the physician finds the first physical sign with which to make the diagnosis of diphtheria. When we consider the principles of medicine in connection with the opinions of authorities such as Loeffler and Cheyne, who declare, that they believe the bacillus to be the exciting cause of diphtheria, and that they have never found the bacillus beyond the psudo-membrane in the throat, we have excellent reasons for concluding that the local or throat conditions in diphtheria is primary, and the constitutional affection is secondary. From this it follows that our aim in treatment should be to suppress the local condition and to support the constitution in its resistance to the invasion of the poison.

—In using chloroform as an anæsthetic the decomposition of the vapor in the presence of artificial light, especially gas, produces irritating and noxious fumes. These have been analyzed by Kunkel and found to consist principally of hydrochloric acid. Where free ventilation is not possible, water or lime-water, or a solution of soda, exposed in a basin or sprayed will neutralize the acid.

DISEASES OF THE EYE ASSOCIATED WITH CARIES OF THE VERTEBRÆ.[1]

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The diseases of the eye, associated with caries of the spine, are, from necessity, of the same pathological nature—strumous or tubercular. The occurrence of ophthalmic affections, in certain cases of spinal caries, has frequently been observed, and the direct association has been frequently noted. It is impossible, in this connection, to sketch the more important lesions met with; suffice it to mention the various affections, pointing out those which have a particular significance bearing upon the relationship existing.

Among the most frequent diseases affecting the lids and lachrymal apparatus are the various forms of conjunctivitis (acute and chronic), eczema, lupus or *scrofulide tuberculeuse*, and dacryocystitis. Of these, lupus is one of those lesions which may be the only evidence of a tubercular condition, and although its tubercular nature has been doubted by Kaposi, for well-known reasons ("because of the paucity of the bacilli in the morbid changes, the non-appearance of general tuberculosis in the same individual after a long duration of the lupus, the impossibility of multiplying lupus by inoculation, and the almost universal immunity from lupus of other members of the same family")[2], anatomically it contains tubercle-bacilli; and tuberculosis can be reproduced by its inoculation. The presence of lupus is peculiarly significant of struma.

Affecting the anterior portion of the globe is that peculiarly interesting affection—phlyctenular disease, and phlyctenular keratitis, with their periods of exacerbation and improvement, almost peculiar to the strumous diathesis. Hypopium keratitis, ulcus corneæ serpens, as the result of dacryocystitis, episcleritis, scleritis, sclero-keratitis, and even staphyloma of the sclera, are met with as direct evidence of a scrofulous dia-

[1] Read before the American Orthopædic Association.

[2] Jacobi, *Keating's Cyclopedia of Diseases of Children*, Vol. ii, p, 173.

thesis. Particularly significant in this portion of the eye is the so-called iritis serosa—formerly known as Descemetitis, a strumous lesion of the iris, involving frequently the ciliary body and deeper structures; and tubercles of the iris, or, as it was formerly called, *granuloma*.

The former affection, or scrofulous iritis as Vernon[1] called it (retaining the name employed by Mackenzie and others), has not received, in late years, from ophthalmologists, the attention it deserves. In fact, Vernon has spoken particularly of the unsatisfactory and inexact state of our knowledge as regards tubercular affections of the eye in his former paper.[2] The nodules attached to the iris in this disease, upon microscopical examination, have been found to consist of "small nucleated cells, with many free nuclei, and a very scanty intercellular stroma, with *débris* of cells, but without blood-vessels or pigment." These cases cannot be classed in the category of iritis, as generally observed, on account of the early age at which they make their appearance, the futility of therapeutic measures, and the danger to life.

The true tubercular affection resembles somewhat the serous iritis in general course, symptoms, etc., and may even terminate in destruction of the globe. The tubercles of the iris found in this disease, and formerly described as granuloma, differ, however, essentially from the nodules found in serous iritis; but their true nature is perfectly identified by recognizing the characteristic bacilli. The posterior portion of the eye, or deeper structures, are less frequently affected, and when diseases do occur as primary lesions, they present no distinctive features. Among these may be mentioned tubercles of the choroid, as a result of general miliary tuberculosis, and especially of tubercular meningitis; and choroido-retinitis, alone, or associated with optic-neuritis.

It will be observed in this enumeration of the diseases of the eye associated with spinal caries, that the majority, and certainly the constant ones, are all of the strumous or tubercular nature; and this introduces us to the relationship of these two conditions and the significance of these diseases to the osseous lesion progressing within. Referring to the relation between scrofula and tubercle, Treves has given the following conclusions:[1]

1. The manifestations of scrofula are commonly associated with the appearance of tubercle; or if no fully formed tubercle be met with, a condition of tissue obtains that is recognized as being preliminary to tubercle. *Anatomically*, therefore, scrofula may be regarded as a tuberculous or tubercle-forming process.

2. The form of tubercle met with in scrofulous diseases is usually of an elementary and often of an immature character, whereas in diseases called tuberculous in a strict clinical sense, a more perfect form of tubercle is met with in the form of the gray granulation or adult tubercle. (Grancher.)

3. Scrofula therefore indicates a milder form or stage of tuberculosis, and the two processes are simply separated from one another by degree.

Accepting this view there is, in other words, in scrofulous persons a constitutional predisposition to caseation, or a tuberculosis of irritated parts. When the bacillus tuberculosis is actually present in the diseased area, scrofulosis has been succeeded by tuberculosis. In etiology most of these diseases of the eye are scrofulous rather than tubercular, possibly from the fact that, being more superficial and accessible, attention is earlier directed to them.

In this connection it is interesting to observe an antagonism, not absolute, but tolerably well established, which seems to exist between the external and internal tubercular processes. This is why phthisis is not more frequent in subjects of hip disease, why subjects with external cervical gland disease are not more often attacked with pulmonary tuberculosis, and why subjects with angular curvature (caries of the vertebræ) are not more commonly attacked by it. It is because of this apparent antagonism that exists between the tubercular diseases, that it is, moreover, unusual for two grave manifestations of scrofula to be active at the same time—one will become manifest, while the other is observed to improve or subside. This observation is particularly to be noted in the associations under consideration. It is common to observe the ophthalmic diseases improve or subside altogether while an exacerbation of the osseous affection supervenes, and *vice versa*. It may be considered, then, as established that the majority

[1] Vernon, *British Medical Journal*, 1874, Vol. ii, p. 276

[2] *St. Bartholomew's Hospital Reports*, Vol. vii.

[1] *Scrofula*, etc., London, 1882, p. 21.

of cases of spondylitis are tubercular; that the etiology of these diseases of the eye and of the caries is the same (*i. e.*, insufficient diet and infection); and that they are both liable to exacerbations.

These facts taken altogether have a peculiar significance, and indicate a prophylaxis and a necessity for treatment which might otherwise be overlooked.

There is constantly going on, in the economy, a warfare by the active, healthy, cellular structures which compose the human organism, against the invasion of parasites. Whether the claim of Metschnikoff be accepted, that the degeneration of the bacilli (which has long been known to occur within the giant cells), results directly from this phagocytic action; whether the statement of Baumgarten be admitted, to regard the relation of the giant cells to the bacteria as one of the strongest evidences against the theory of phagocytosis; or whether the agnostic expression of Osler be taken as the present state of our knowledge—the indication to employ both constitutional and local treatment deserves emphasis.

In conclusion, if this short paper convert but one practitioner to the importance of treating all localized tubercular lesions with constitutional as well as local treatment, the object for which it was written will have been accomplished.

To summarize, then,

1. The diseases of the eye associated with caries of the vertebræ are scrofulous or tuberculous.

2. Scrofulosis is a predisposition to caseation; tuberculosis is the infection with tubercle bacilli.

3. Both the diseases of the eye and the caries of the vertebræ require constitutional as well as local treatment.

Reports of Clinics.

BUFFALO GENERAL HOSPITAL.

MEDICAL CLINIC—DR. CHAS. CARY.

The first patient had been before the class already. He was admitted two months ago, suffering with uremic poisoning. At one time the urine fell to 170 c. c., with 4 grams of urea in the twenty-four hours. Dr. Cary said that he was brought before the class now, more to show what humanity can endure than for further elucidation of the case. He had had œdema and ascites, which gradually diminished as the condition of the urine improved in quantity and quality. Albumin was still present in large amount. The first examination impressed Dr. Cary with the idea that there was something behind the maladies which were apparent, and he had therefore examined him daily, and every two or three days there had been some new development. He had had pericarditis with a most marked friction sound, which disappeared before the day on which the ward-class was to examine him, but which had reappeared, and it was now heard indistinctly. He also developed endocarditis. The liver was at one time lower than normal; then it returned to its normal position; and now it was down again. The liver was depressed in position rather than enlarged, and the change of position was due to the varying quantity of fluid in the right chest—for the man had had pleurisy of both sides with an abundance of effusion. The presence of pain and fever and the development of inflammation of the endocardium and pericardium determined the diagnosis of pleurisy instead of hydrothorax. The man also had a pneumonia of the left lung.

The patient was a mere shadow of his former self. When first presented to the class his legs were enlarged from the dropsical effusion; now there had been not only an absorption of the effusion, but also a wasting of the muscles, so that he was reduced almost to a skeleton. During the course of the pericarditis he had received small doses of opium and mild counter-irritation, about rather than over the pericardium. The effusions had been carefully watched, so that aspiration might be performed if necessary; but they had been reduced by salines instead, and when they had become slight nothing had been done for them. On account of the chronic renal disease, there was no prospect of the patient's recovery, and the fact that his life had been prolonged by good nursing and symptomatic treatment was really no benefit to one in his deplorable condition.

Rheumatoid Arthritis.

The next patient was a single man, thirty-four years old, though appearing much older. He was born in Buffalo of Irish parents. He had been a hired man on a farm. His family history was wholly negative. He had enjoyed fair health until two years ago. Five

years ago, while killing hogs, one of the pigs pressed his right knee against a pump-spout, causing considerable pain but no disablement at the time. Two weeks later the knee became sore and slightly swollen on the inside. He did not consult a physician, but relieved the pain and swelling by using a liniment. The knee gave him no further trouble for two years, when the symptoms returned spontaneously but without confining him to the house. The knee improved, but did not become entirely well; and a third attack confined him to bed for three or four weeks, the right knee being much inflamed and swollen, and the left participating to a less degree. A physician aspirated both joints. Even before the knee-joints were so badly swollen as to need tapping, the wrists, elbows and right ankle began to swell.

The man had had gonorrhœa eight years ago, lasting seven days, and without recurrence. The beginning of his trouble could not, therefore, be a gonorrhæal synovitis. His countenance, sunken eyes, flushed cheeks and coated tongue indicate that he is suffering from some constitutional disturbance. His left pupil was shaped like an old-fashioned kite, curved above and coming to a V below. This suggested iridectomy, but the man said the condition was congenital, and that the vision of this eye was better than that of the right. Syphilis was denied.

The knees were much enlarged, the patella was three or four times its normal size and the swelling, especially at the inner side, was soft and fluctuating. Under the finger there were movable masses, undoubtedly of cartilage, which could be chased around by the finger. There was a parchment-like crackling. The legs were markedly atrophied.

A similar enlargement was present to a less degree in the ankles, wrists, elbows and metacarpo-phalangeal and many of the interphalangeal articulations. There was also muscular atrophy of the arm and forearm.

This, said Dr. Cary, is the disease called rheumatoid arthritis or arthritis deformans, or, by some, rheumatic gout, which is not a classical name. It is an essentially chronic disease prevailing much more among the poorer classes than among the well-to-do; for which reason it has been described as the arthritis of paupers. A clean-cut differentiation between this disease and rheumatism cannot be made, any more than between acute and chronic rheumatism. If this man had been brought before a class two years ago, he might have been used to illustrate chronic rheumatism, and his first serious attack of inflammation might possibly have been erroneously described as acute articular rheumatism; but at this stage the diagnosis is unmistakable.

Rheumatism is a disease that attacks only fibrous structures, sometimes the synovial membrane, sometimes the ligaments of a joint, sometimes the pericardium, heart-valves, pleura, etc. Chronic articular rheumatism damages a joint more by the production of fibrous ankylosis than by causing any definite pathological alteration. In this disease there is an absolute inflammatory growth of bone. There is an inflammation of the cartilages, so that they enlarge and form nodules projecting into the joint cavity under the synovial membrane, and fragments may then break off and lie loose in the fluid of the joint. The deeper layers of cartilage become more bony, and the superficial layers soften, so that the cup which the cartilage forms on the end of a bone becomes deeper. There is an enlargement of the ligaments about the joint, and even the synovial fluid is increased, and it is usually thick, dark and almost mucoid. Later in the disease the muscles take on spasmodic contraction. This man has never had cramps; but, as he stands, the muscles of the leg are in a state of tension, and complete extension of the leg is impossible. The elbow also cannot be flexed and extended as widely as it normally should.

This disease was described even in the last century, although under a different name. The cases are usually not seen so far advanced as this one.

What is the poison to which the disease is due? Many contradictory answers have been given. Some claim that it is due to sepsis, citing those cases which begin with gonorrhœal arthritis as proofs. Others say that it is tubercular, one member of a family having this form of arthritis while another has typical tuberculosis. It is not probable, however, that there is any such close connection, although tuberculosis may arise in a joint already diseased in this way. Others claim that it is due to faulty nourishment, bad air and unfavorable environment. This is certainly true; but is not a complete explanation.

Not uncommonly the heart is diseased along with the rest of the connective tissue structures. This patient has a mitral regurgitant and an aortic obstructive murmur.

Treatment is not very promising, mainly because the persons affected are usually unable to follow the directions which would naturally be given. Massage, sojourns at Vichy, Carlsbad, Saratoga, etc., are quite beyond their means. The taking of plenty of good rich food is beneficial—quite the contrary of the indication in rheumatism. Iron is serviceable. The skin, bowels and kidneys should be kept active.

Acute Endocarditis.

The history of this patient was as follows: J. G., twenty-five years old, single, born in this country of Irish parents, laborer. His father, fifty years old, had had rheumatism a great deal. The mother died at the age of thirty-six years, of some acute disease. Four brothers and one sister were alive and in good health. The patient had had varioloid and measles in childhood, malarial fever eight years ago, gonorrhœa six years ago, chancroid or perhaps chancre five years ago.

He had indulged for six years in periodical sprees. His general health had been good. About four weeks ago he got wet and took cold. He became better, but then had pain in the back and shoulders, which were still lame and painful. He had been rather short of breath for about a year. His urine was yellow, faintly alkaline, urinous in odor, with a specific gravity of 1.017, depositing considerable white sediment, but without albumin or sugar. The man's temperature on admission was 98.2°, his pulse 94, his respiration 20. He had an eruption on his arms which he said came out when his blood was out of order. He had been taking "blood medicine." There was a history of a sore on the penis, which was described as a soft chancre. His hair had not fallen out, nor had he had sore throat, etc. Dr. Cary said that he probably had had syphilis.

When he entered the hospital the man had a loud mitral regurgitant murmur, and as there was no cardiac hypertrophy, and as he never had rheumatism before, acute endocarditis was diagnosticated. Rest and salicylates were ordered, and later iodides were added. He had lost the pain in his arms and shoulders and the murmur had almost disappeared.

—The Malabar nut of East India is in vogue amongst the natives as a cure for scald-head and other microphytic skin diseases.

PERISCOPE

Treatment of Hemorrhoids.

In an article in *The Cincinnati Lancet-Clinic*, November 29,. 1890, Dr. L. J. Krouse gives a summary of the treatment of hemorrhoids, in which he says:

The ligature dates its origin back to the time of Hippocrates. His method consisted in applying a woolen thread as ligature to the base of the tumor, and then cutting off the strangulated mass. This method, with some improvements, has been handed down to our own times, and has been brought more into favor by Allingham. His method is to have the bowels first thoroughly moved by a cathartic, and shortly before the operation a large enema should be given, both for its cleansing effect as well as to bring the piles well into view. While the patient is straining, each pile should be caught separately by a tenaculum. Acting on the anatomical knowledge that a pile is supplied by a blood-vessel which enters from above, he cuts the pile loose from its attachment below and then dissects up the mass to about the point where the blood-vessel enters. A ligature is then thrown around the pedicle and the mass is cut off. If the pile is very large, it is divided into two or more segments by transfixing the mass with a needle armed with a ligature, and each segment is separately tied. The stump is then returned within the sphincter. This method is the one that is most commonly used, and requires from ten days to two weeks' confinement to bed, and frequently necessitates the use of the catheter.

The clamp and cautery method was first used in London, in 1848, by Mr. Lee. His plan of treatment consisted in applying a clamp to the base of the tumor, cutting off the greater portion of the protruding mass, and then applying nitric acid to the raw surface. Mr. Henry Smith, of the same city, has used this method for many years, and has improved it by using the actual cautery instead of nitric acid to the raw surface. "The method of using the clamp," he says, "is very simple, and consists of the following manœuvre. The diseased portions, being well brought down previously by an injection, are separately seized with a vulsellum and handed to an assistant. The part is then enclosed within the blades of the clamp, which are screwed home quickly and thoroughly. The prominent portion of the

pile or prolapsus is then cut away by a sharp pair of scissors. The cut surface is next dried by a piece of lint or sponge, and either nitric acid or the actual cautery, so shaped as to come into contact with the whole of the raw tissue, is applied. When this is effected the blades are gently and slowly unscrewed, and, if there is no bleeding, the part is well oiled and allowed to return within the cavity of the gut; if, however, any bleeding point is seen, the blades are quickly screwed together and the cautery applied until the vessel is thoroughly sealed up. The finger is then introduced well up into the rectum. This step serves the triple purpose of returning all the parts well, of compressing any point which may possibly bleed, and of exciting the sphincter to healthy action."

More formidable than either of the preceding methods is that which goes under the name of Whitehead's operation. It consists of the removal of the entire pile-bearing region. A circular incision is made around the anus at the junction of the skin and mucous membrane, and an inch to an inch and a half of the mucous membrane of the lower part of the rectum is removed. Only the affected and diseased mucous membrane with some of the submucous tissue, is excised, the other coats of the gut not being interfered with. The healthy portion of the mucous membrane above is then brought down and is attached to the skin of the anus. An ideal surgical procedure! This operation is limited to those cases of severe type, where the whole circumference of the gut is studded with piles.

Leaving these more severe surgical operations, which require the patient to be under the influence of an anæsthetic, we come to the simpler methods, which ean be readily done in the physician's office, and which most physicians rather prefer, as no blood is spilt.

The injection method consists of injecting a certain amount of a coagulating fluid into the pile by means of a hypodermic syringe. Different surgeons use different fluids. Kelsey employs carbolic acid in 15, 33, 50 and 95 per cent. dissolved in water with enough glycerine to keep the solution clear. Dr. Fenn's solution consists of equai parts of fluid extract of ergot and a 95 per cent. solution of carbolic acid. Dr. Washburn uses a solution of carbolic acid in sperm oil in the proportion of 1 to 2 or 1 to 4, depending upon whether he wishes to produce sloughing of the tumor or only induration. Givard employs a solution consisting of tannic acid one part, carbolic acid two parts, alcohol four parts, and glycerine eight parts. The injection fluid used by those that follow the so-called "Brinkerhoff system" is composed of carbolic acid ℥i, olive oil ℥v, and zinc chloride grs. viii.

Electrolysis has been used to destroy these tumors. The positive electrode, which is a needle, is introdnced into the centre of the tumor, while the negative pole is placed on an indifferent portion of the body. A current strong enough to produce a caustic effect should be used.

Having mentioned the various modern methods in use for the destruction of these tumors, it behooves us to analyze which of them is the safest for the patient, and which will cure him in the shortest time.

Henry Smith, in his report of over four hundred and fifty cases, in which he applied the clamp and cautery, not only to hemorrhoids, but also to prolapsus, states that he has lost but two cases. In only one of these cases was death due directly to the operation, the patient suffering from a prolapsus of such extent as to bring down part of the peritoneal covering of the bowel; this caused secondary peritonitis with fatal issue. He condemns the method of ligation, saying that it is often followed by ulceration, tetanus, pyæmia, and occasionally by death.

Bodenhamer, although not agreeing with Mr. Smith in his general condemnation of the ligature, still says that "the method by clamp, scissors and actual cautery, is the best and safest, and should be preferred if ever such an operation is resolved upon."

Kelsey now uses almost entirely the clamp and cautery, and says that after ligating these tumors, according to the plan of Allingham, he often found his patients suffering great pain, which lasted from eight to ten days, and that he was frequently compelled to use the catheter for several days. Since using this method, his patients are almost entirely free from pain and seldom has he need to resort to the catheter. The convalescence is shortened, the patient being up on the second or at most on the third day. According to Mr. Smith the patient so treated leaves the hospital on the fourth, fifth or sixth day.

Van Buren says that "the actual cautery, with our present facilities of applying it, stands very nearly on a par with the ligature."

As regards the injection plan of treatment, most authorities who were at first highly pleased and enthusiastic over it, have, after their first enthusiasm passed away, given up this method almost entirely.

It was claimed by those who used this method that it was safe; that it was free from pain, and that it necessitated no confinement from work.

On the contrary, Dr. Matthews declares "that it is painful, insufficient and liable to cause death by peritonitis, embolism and pyæmia."

Allingham says that he has "tried the injection plan, but the result was much pain, more inflammation than was desirable, a lengthy treatment, and the result doubtful; certainly not a radical cure."

Kelsey, who at first was an enthusiast, is not so now, and rarely uses it unless in selected cases. He claims that sloughs, marginal abscesses, lymphangitis, ischio-rectal abscesses and deep fistula frequently follow, but has never seen a fatal case.

Andrews states "the method is moderately, put positively dangerous, and we cannot recommend it as proper in ordinary cases." In 3,304 cases collected by him, he finds that there were 13 deaths: embolism of the liver, 8; abscess of liver, 1; dangerous hemorrhage, 10, permanent impotence, 1; stricture of rectum, 2; violent pain, 83; severe inflammation, 10; sudden and dangerous prostration, 1; carbolic acid poisoning, 1; failed to cure, 19; sloughing and other accidents, 35.

In conclusion Dr. Krouse says that judging from the views expressed by well-known authorities, and from his own experience, he believed that good results may be obtained by any of the surgical methods mentioned above. He says that he has a preference for the clamp and cautery operation, which seems to him to be the safest, producing a good result in a short time with the least discomfort to the patient. In cases, however, in which the patient absolutely refuses the major operation he would not hesitate to employ the injection plan, using, however, the weaker solutions.

Meat Preservation.

Dr. Hans Beu, in the *Centralblatt für Bakteriologie und Parasitenkunde*, points out that nearly all the newer methods of preparing preserved meats have had to give way before the older methods of boiling, drying, salting and smoking, which, along with freezing, preserve the taste and digestibility of meats better than any of the chemical methods that have more recently been recommended. All these old methods, he maintains, hinder decomposition and keep meats eatable for a longer or shorter period. Cold acts by preventing putrefactive changes in meat, 2° to 4° C., with good ventilation, preventing the development of most organisms. Boiling with subsequent exclusion of air is, of course, good, but can only be carried out in large establishments and under specially favorable conditions. Drying gets rid of the water, without which micro-organisms cannot develop, but, although there is no loss of albuminoid or salts when this method is used, the taste is somewhat impaired. Salt also acts by removing water, but it also removes the extractives, and interferes with the delicate flavor of both meat and fish. Smoke acts partly by drying, the heat at which it is generated rendering this necessary, but partly, also, by the action of the small quantities of the antifermentative constituents, such as creasote, carbolic acid and even volative oils, which appear to have a direct action on the vitality of putrefactive organisms. The author agrees with Förster, that salt has little or no effect upon most pathogenic organisms, but it undoubtedly interferes with the development of the cholera bacillus and of anthrax bacillus that contains no spores, and probably, also, of some of the non-pathogenic but putrefactive forms. As the result of his experiments on a very large number of food materials, such as ham, bacon, pork, various kinds of sausages, and fish, Beu comes to the conclusion that most meats are salted not only to preserve the taste, but also to withdraw a large proportion of the water from flesh; that smoking also withdraws a considerable quantity of water, that it hides the salty taste, and that, being able to penetrate dried flesh, it is better able to exert its antiputrefactive action than on fresh meat. Salted lean flesh, exposed to the action of smoke at from 22° to 25° C. for forty-eight hours, no longer contained liquefying organisms, which had been present in considerable numbers before the smoking operation was commenced, but non-liquefying organisms disappeared only on the ninth day of smoking. Salt bacon salted for ten days, and then exposed to the action of smoke for forty-eight hours, also showed no liquefying

organisms with a fragment from near the centre taken with the most strict precautions, and broken up in liquid gelatine, which was afterwards allowed to solidify. All non-liquefying organisms had disappeared on the seventh day of smoking. Bacon salted for five weeks contained no organisms after seven days' smoking. Fresh unsalted meat contained both kinds after six days of smoking, and sausage also contained both at the end of twelve days; this being exactly in accordance with what would be expected from the large amount of water that is contained, from the nature of the meat used, and from the many manipulative processes through which it has to go before the smoking is commened. Fish may be preserved for a short time by smoking only, but it could not be kept permanently. Hams and larger sausages require a longer period of smoking than do similar smaller articles of diet.—*British Medical Journal, Supplement*, November 22, 1890.

Small Doses.

In the *Edinburgh Medical Journal*, December, 1890, Dr. J. L. Porteous praises the use of small and repeated doses of a variety of drugs, among them gelsemium, calomel, opium, nux vomica, and nitro-glycerine. Speaking of the assayed fluid extract of gelsemium he says: "I have found wonderful benefit derived from the use of this medicine in minute doses—say five drops of the extract in four ounces of water, one teaspoonful of this every ten minutes for one hour, then every hour. When I first read of this mode of administration of the drug I was sceptical, but at the same time was determined to try it. I had an early opportunity, which presented in the form of threatened pneumonia. The condition of patient was as follows:—There were minute crepitations; pain in lungs; temp., 104°; pulse, 130; skin hot and dry. After two hours' treatment, as above, the skin became moist, temperature and pulse were reduced, and what appeared to be the commencement of an attack of pneumonia averted. If aconite in same proportion be added, the results are even more satisfactory.

The drug is powerful. Five drops may cause double vision and other toxic symptoms, but when given in minute doses these symptoms are avoided, and the beneficial effects of the medicine only are produced. Of course this medicine is not infallible, and Dr. Aulde thinks that if it does not relieve within twenty-four hours it ought to be discontinued. He has found it of service in the neuralgic pains of dysmenorrhœa."

Calomel, in small doses (gr. $\frac{1}{10}$) Dr. Porteous says, is a sedative to the stomach, liver and intestines, and favors the pouring out of the watery portions of the blood into the intestines. Small doses increase the secretions, large doses arrest them. Tablet triturates, each containing gr. $\frac{1}{20}$, prove useful in derangement of the alimentary tract in children often due to torpid liver. One must be given every half-hour till six or eight have been taken.

Opium given in small (gr. $\frac{1}{8}$) repeated doses, contrary to general teachings, *increases* secretions—*e. g.*, ovarian or other reflex pain which interferes with secretion and causes constipation is undoubtedly relieved by them. By them pain is relieved to such an extent that the secretions are re-established and purgation is the result. If given in like doses in bronchitis, where there is great dryness and burning pain with every cough, after several small doses secretion will take place and the raw feeling relieved.

Ten drops of nux vomica in a wine-glassful of water, of which one teaspoonful is given every ten minutes for one hour, then every hour, has proved beneficial in the only case of vomiting of pregnancy in which Dr. Porteous tried it. The stimulating effects are not only felt upon the terminal filaments of the pneumogastric, but this action is carried to the liver, and extends to the entire nervous system, and as long as there are no astringents given to arrest peristalsis, the bile is carried downwards, and the vomiting ceases. In typhoid fever, when it is lingering and vitality is at a low ebb, it proves useful given of same strength as mentioned above, only every hour during day, and every two hours during night.

Nitro-glycerine has been in much favor for some time. Dr. Porteous has found it useful in one-drop doses of a one per cent. solution every five minutes during a paroxysm of asthma. If given in tablet form the tablet should be dissolved in the mouth before swallowing.

Chinese Treatment of Diphtheria.

The *Lancet*, November 22, 1890, says that a popular remedy for diphtheria, which has been employed in China for over 300

years. recently formed the subject of a communication by M. Lecerf to the Société de Médecine Pratique of Paris. The treatment consists of blowing a powder into the throat, using a decoction of plants as a gargle and drink, and the employment of certain hygienic measures. The powder is called *sin-seh*, and it appears to consist essentially of borax, camphor, powdered pearls, cinnabar, acetate of copper and charcoal, the percentage of borax and camphor being respectively 42.5 and 12. From twenty to thirty centigrams of this powder are blown through a paper tube every two hours. The decoction is difficult to imitate, as it is made from the following: roots of the coptis teeta (Scutellaria viscidula), Hanax quinquefolium or ginseng and Platycodon grand; flowers of Caprifolium chinense, fruit of the Uvularia cirrhosa, bark of Pterocarpus flavus, Capanus flavus root, and Glycyrrhiza glabra. About fifty grams of each are boiled in a pint of water until it is reduced to 200 cubic centigrams. This is filtered, allowed to cool and given in three doses in the twenty-four hours. The regimen enjoins the avoidance of ice, cold drinks, sugar and fatty matters and fruits, but allows at first boiled rice, eggs and salt fish, and later boiled chicken and bread. A large number of cases are said to be cured in three days, but the evidence on which they are termed diphtheritic is by no means conclusive.

Tuberculous Milk and Diseased Udders.

Dr. B. Bang, of Copenhagen, in the *Münchener med. Wochenschrift*, October 14, 1890, gives an account of his investigations undertaken to determine whether or not milk from tuberculous cows, but cows with healthy udders, is virulent. Observations made in the Copenhagen slaughter-house indicate that only a little over one per cent. of tuberculous cows have pronounced tuberculous udders. It is important, therefore, to determine whether the milk of tuberculous cows with healthy udders contains bacilli and is capable of transmitting the disease. Bang's first studies, made in 1884, led him to decide this question in the negative. In 1888, Bang made experiments with the milk of twenty-eight cows, nearly all tuberculous in a high degree, but with healthy udders. Forty-eight rabbits were subjected to intraperitoneal inoculation, and of the whole number only two became affected with the disease. The results of Hirschberger, working in Bollinger's Institute, were very different. He inoculated guinea-pigs intraperitoneally with the milk from twenty different tuberculous cows, and found eleven of the guinea-pigs infected. As guinea-pigs are more susceptible of tuberculosis than rabbits, Bang determined to re-investigate the question and use guinea-pigs. Forty of these animals were inoculated with the milk of twenty-one cows. The cows furnishing the milk were in a high degree tuberculous. After furnishing the milk they were, some time later, slaughtered, and their organs sent to Bang for investigation. He was thus enabled to know with certainty the exact condition of the animals. The milk of seventeen of the cows was not virulent, while that of four proved to be virulent. In three of these four cows, there was disease of the udder of different degrees. In the fourth cow, no disease of the udder could be detected, but the animal had advanced tuberculosis of the lungs, pleura, mediastinal and mesenteric glands, liver and intestinal canal, and had *died* of the disease, whereas the other animals had been slaughtered. Moreover, the udder had suffered from a chronic inflammation with shrinkage. The appearance was not that of tuberculosis, but as the tissue was not examined under the microscope tuberculosis could not be excluded absolutely even in this case.

The result of Bang's investigations appears to prove that the milk of tuberculous cows is virulent (by inoculation) only when there is at the same time disease of the udders.

Irregular Typhoid Fever Rash.

The *New York Medical Journal*, December 6, 1890, quotes Dr. R. L. MacDonnell as pointing out in a clinical lecture, in the *Montreal Medical Journal* for November, some atypical conditions of the skin among his cases at the General Hospital. The number of patients with the disease—seven men and five women—was somewhat larger than usual at this season of the year, but the type of the disease has, for the most part, been a mild one. Unilateral sweating was noticed in the case of the strong young Englishman who had a fairly severe attack of the fever. On the day of his admission

the one-sided sweating was well marked, but it had disappeared three days later. In one case a pale scarlatiniform rash was noted within a few hours after admission, confined to the neck and shoulders; it was of short duration. No medicines had been administered. In the case of a young girl, urticaria in distinct wheals manifested itself in the third week of an attack that had not been severe. In the case of a pregnant woman, who had a protracted attack of typhoid, there was jaundice lasting three days. In the case of a man who had a sharp attack, with extreme meteorism, for the relief of which turpentine stupes were used, pustules appeared upon the abdomen at the site of the typhoidal eruptive spots; in some of these small abscesses, containing from half a drachm to a drachm of pus, were formed.

This accident Dr. MacDonnell had noticed once before as a result of the use of turpentine stupes in fever. Four irregular forms of eruption in typhoid fever have been specified by Moore, of Dublin, such as erythema fugax, miliary eruptions, erythema simplex (seu scarlatinale), and urticaria. The scarlatiniform rash is most likely to show itself at the end of the first week or in the course of the third week, and when it appears early it is apt to give rise to diagnostic embarrassment, but the prodromes of scarlet fever are wanting, and the rash has been of a lighter color, less rough and punctiform than that of the exanthem; the rash is a blush rather than an eruption, and may be considered as a result of some disturbance of the peripheral vaso-motor system.

Alterability of Diuretine.

The *American Journal of Pharmacy*, December, 1890, says that diuretine is decomposed by all acids, even carbonic acid. Exposed to the air it becomes partially insoluble, making it necessary to treat it with caustic soda. Even in solutions, carbonic acid acts upon diuretine, and the mixtures become cloudy on account of the precipitation of theobromine. Not only weak acids, but such salts as the biborates, bicarbonates and dimetallic phosphates, decompose diuretine; hence, we cannot use it with fruit syrups or with soda bicarbonate. There is no advantage in giving theobromine transformed into diuretine, since, on reaching the stomach, it is decomposed by the gastric juice. It would be preferable to give theobromine in cachets or by enema.

Palatable Emulsion of Creasote.

The *Western Druggist*, November 15, 1890, gives the following for a palatable preparation of creasote, the taste of which is notoriously hard to disguise.

℞	Creasote	gtt. 16
	Oil of clove	" 8
	Oil of cinnamon	" 4
	Oil of peppermint	" 4
	Olive oil	fl. oz. 1
	Acacia	fl. dr. 4
	Water	" 6

Make an emulsion and complete the mixture by adding

℞	Glycerin	fl. dr. 4
	Water . . . enough to make	" " 4

Each tablespoonful contains one drop of creasote. The aromatics may be increased.

The Tetrahydronaphthylamines.

Dr. R. Stern, in the *Archiv für pathologische Anatomie*, gives an account of some recent experiments made on animals with the tetrahydronaphthylamines. The preparation used was an aqueous solution administered hypodermically. An increase in temperature resulted in an hour, with dilatation of the pupil and general symptoms of poisoning. There was an increase in the quantity of urine voided, and in its nitrogenous and phosphatic constituents, the poison reaching its maximum effect on the second day, when the symptoms gradually subsided. The observer concluded that the changes in the urine were not those common to high temperature, but were consequent upon the specific poisonous action of the drug.—*New York Medical Journal*, November 29, 1890.

Challenge to a Fast.

Dr. H. S. Tanner, who fasted forty days, now lives near Clinton, Missouri. He has challenged Succi to sit down with him in Chicago during the World's Fair to test the matter in a ninety-days' fast on water only, or, if Succi prefers, let the fast continue from day to day till one or the other yields the contest.

THE
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ISSUED EVERY SATURDAY.

CHARLES W. DULLES, M. D.,
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The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

DIAGNOSTIC SIGNIFICANCE OF THE TUBERCLE BACILLUS.

Whatever views may be held in regard to the value of Koch's remedy for tuberculosis, there is certainly a very widespread conviction that the bacillus which he described as constantly present in tuberculosis is of great importance as an evidence of the nature of the morbid process. Careful and conscientious students of tuberculosis have doubted and have denied the significance attached to the bacillus by the followers of Koch; and the REPORTER has more than once indicated a feeling that the latter go further in some of their assumptions than the facts warrant. But fairness to our readers demands that we present what we believe are the views of the profession—even when they do not accord entirely with those of the Editor.

For this reason we call attention to a short communication in the *University Medical Magazine*, November, 1890, by Drs. Fussell and Kelly, of the University of Pennsylvania, urging the significance of the tubercle bacillus as diagnostic of tubercular phthisis.

In 1887 Dr. Fussell read a paper before the Philadelphia County Medical Society, based on the examination of the sputa of 100 cases of lung disease. The conclusions arrived at were: That the presence of tubercle bacilli in the sputa of any given case was undoubted proof of tuberculous phthisis, and that the continued absence of the organisms from the sputa of any given case was good, though not positive, proof of the absence of phthisis. These conclusions were confirmed by examination of the sputa of sixty-five cases in 1890.

In these sixty-five cases, forty-four patients had undoubted physical signs of phthisis, and tubercle bacilli were present in the sputa of all. Four had doubtful physical signs, and tubercle bacilli were found in the sputa of all. Eight had no physical signs of phthisis, and tubercle bacilli were absent from all. Nine had doubtful physical signs, and tubercle bacilli were absent from all.

The nine cases in which the signs were doubtful, and tubercle bacilli absent, are full of interest, but space prevents their extended notice. Two were cases of pneumonia, one of the apex in a boy with Pott's disease, where phthisis was feared, but who has entirely recovered. Another of the cases did not take the usual course of pneumonia, but has completely recovered. There was a case of pleurisy; one of anemia, with cough, etc. In all these cases it was a great relief to the physicians when repeated examinations failed to demonstrate bacilli.

That the ground, "absence of tubercle bacilli is good, though not positive, proof of absence of phthisis" is well taken is proved—Dr. Fussell thinks—by one of the cases he cites. This case is quoted in Dr. Fussell's article as one with doubtful signs,

absence of bacilli and recovery. In 1887 he had been under observation for one year, and seemed entirely well, but in 1889 he again came under observation, with marked consolidation of left apex, numerous bacilli in sputum and death early this year.

As the method of examining sputum for tubercle bacilli is simple, not requiring much technical knowledge, and but a moderately powerful microscope, it seems as if such examinations ought to be made in all cases in which there is suspicion of tuberculosis. By such examinations something would almost always be gained, and—if nothing else—a store of observation which might bring to agreement those who now do not agree on what is one of the most interesting pathological questions of the present day.

MYXŒDEMA RELIEVED BY GRAFTING WITH THE THYROID.

Myxœdema is a curious affection in which the features become broad, flattened and expressionless. The eyes appear too wide apart, the wings of the nose are thick, the lips large, the loose tissue below the eyes increased and folded, and heavy folds of connective tissue form under the jaws and in the neck. The tongue also undergoes enlargement and interferes with articulation, while the hands are broad and spade-like. The person affected gradually becomes less active mentally and physically, the prevailing mood being one of placid indifference and apathy.

Several varieties of myxœdema have been described: Myxœdema of adults (pachydermic cachexia of Charcot); operative myxœdema of Reverdin (cachexia strumipriva of Kocher); and idiocy with pachydermic cachexia of Bourneville and Bricon —the sporadic cretinism of English writers. The link which unites these varieties is absence of the thyroid body, or its disappearance as the result of disease or surgical operation. Kocher found that removal of the thyroid for goitre, which is so common in Switzerland, resulted in producing a condition very similar to cretinism in the adult; and Horsley produced a similar condition by removing the thyroid in monkeys. Following these experiments, Schiff went a step further by making the first graft of a thyroid. His purpose was to prove that the thyroid has chemical and hematopoietic functions independent of its position. He showed this by transplanting to the peritoneal cavities of several dogs, some time before doing thyroidectomy on them, portions of a thyroid from another dog. The result was satisfactory: the animals survived thyroidectomy without presenting the phenomena usually provoked in animals by ablation of the thyroid. Eiselsberg confirmed Schiff's experiments, employing cats instead of dogs, and adding the important observation that the death of the animal from thyroidectomy is prevented only when the graft of another portion of thyroid succeeds.

If the grafting of a portion of thyroid prevents the results of thyroidectomy in animals, why should it not prevent or overcome myxœdema in human beings? asked Horsley, in the *British Medical Journal*, February 8, 1890. Lannelongue, as described in an Editorial in the REPORTER, April 12, 1890, undertook to accomplish this, and it has been tried also by Bircher, Kocher and others. In *Le Mercredi Médical*, November 19, 1890, Merklen and Walther give a review of the cases in which grafting with the thyroid for myxœdema has been done, and report in detail a case of their own. The patient was a woman, forty-one years old, who had had myxœdema for ten years. Metrorrhagia preceded by ten years the development of myxœdema, and had never ceased since the occurrence of the latter. Walther, at the request of Merklen, transplanted one of the lobes of a thyroid from a sheep into the sub-mammary region on the right side of the patient. The operation was done so that only a few seconds elapsed between the removal of the

portion of thyroid from the sheep and its insertion into the patient.

The metrorrhagia from which the patient suffered ceased three days after the operation, and had not been reproduced up to the time of the report, seventy-two days subsequent to the operation. At the same time there was a remarkable improvement in the patient's myxœdema; the outward evidences of the disease became less conspicuous, speech was much more distinct, and the patient could walk easily and quickly about the ward, whereas several weeks before it had required fifteen minutes for her to make the tour of the ward.

The exact future of this operation cannot be predicted at present. It is perhaps a step in the right direction; and while those who may require it are unquestionably more numerous in Europe than in this country, there is no impropriety in calling attention to it here. One thing deserves mention before leaving the subject; in some of the cases in which grafting has been done, the transplanted thyroid has, after a time, atrophied, the symptoms of myxœdema have reappeared, and a second grafting has been necessary. In Merklen's case, also, the transplanted thyroid, when last examined, appeared to have diminished somewhat in volume. Perhaps later experience will avoid the disappearance of the graft by indicating a better seat for it.

THE GONOCOCCUS IN THE DIAGNOSIS OF VULVITIS.

Physicians are often in doubt whether a particular vaginal discharge is gonorrhœal or due to some other cause capable of provoking suppurative inflammation. When, in adults, the discharge has appeared suddenly, is purulent in character, and in its early stages has been associated with scalding pain on micturition, a hot and tender vagina with bright red points covering the mucous membrane, and with a red, velvety or granular os uteri, the probabilities are altogether in favor of gonorrhœa. And yet it is doubtful whether many men could be found willing to take the witness stand and declare positively, from the symptoms and appearances we have described, that the disease is gonorrhœa. The difficulty becomes still greater when the patient is not an adult but a child. Fortunately the cases of gonorrhœa in little girls are much less frequent in this country than they appear to be on the continent of Europe, where physicians to law courts have been put to it to find an infallible method of differentiating gonorrhœal vulvitis from that due to other causes.

The discovery of the so-called "gonococcus" by Neisser was hailed by many with enthusiasm. Supposing it to be the specific cause of gonorrhœa, then to find it in a suspicious discharge would be proof of the gonorrhœal character of the discharge. But it was scarcely discovered before assertions were made that it could be found in non-specific discharges, and that it could not be distinguished under the microscope from other bacteria, particularly diplococci. The latter conclusion is the one to which Vibert and Bordas have come. These writers have investigated, from a medico-legal point of view, the discharge present in the vulvitis of little girls, and declare, in *La Médecine Moderne*, November 13, 1890, that microscopic examination of such discharge never enables an expert to affirm that a particular vulvitis is or is not gonorrhœal. They find the gonococcus practically indistinguishable from the diplococcus—both bacteria, they say, have the same form and dimensions, the same arrangement in masses and heaps, and not in chains, and they stain alike and are alike deprived of their stain by alcohol.

It not infrequently happens that men are accused of having committed rape upon little girls, and sometimes vulvitis is adduced as one of the evidences of the violation. A vulvitis, however, has been found in a violated child although the person guilty of the rape was free from any evidences of urethral

disease. It would seem to be impossible, therefore, in the present state of our knowledge of the bacteriology of gonorrhœa, to base upon it a diagnosis sufficiently positive to warrant a judgment by the court in a criminal suit. No doubt this difficulty will be overcome by and by, and perhaps by cultivation the gonococcus can be distinguished from the diplococcus. But just now the conclusion seems to be that our methods of detecting the gonococcus are not precise enough for medico-legal purposes.

Book Reviews.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the Reporter.]

THE DAUGHTER—HER HEALTH, EDUCATION AND WEDLOCK. By William M. Capp, M. D. 5½x7 inches, pp. viii, 144. Philadelphia and London: F. A. Davis, 1891. Price, $1.00.

Dr. Capp's little book is written in an attractive style, and contains a great deal of what he fitly calls "homely suggestions for mothers and daughters." The subject of the book is the development and training of young women for the position and duties peculiar to their sex. It is decidedly pleasant to see a book of this sort, which—in the present fever to make women like men—treats of them as women solely. Dr. Capp gives such advice as, we think, will be welcomed and approved by womanly women, and of a sort which, well pondered and wisely followed, will tend to increase the number of women capable of being good and loved wives and mothers. We commend his book to the attention of the readers of the Reporter, and believe it would be a help to most thoughtful parents who have daughters to train.

A MANUAL OF THE PRACTICE OF MEDICINE. By Frederick Taylor, M. D., F. R. C. P., Physician to, and Lecturer on Medicine at Guy's Hospital, etc. 8vo, pp. 877. With illustrations. Philadelphia: P. Blakiston, Son & Co., 1890. Price, $4.00.

Dr. Taylor has undertaken to write a short yet complete account of the present state of medical practice. It cannot be denied that such an undertaking demands great courage when one considers the vast extent of the field to be covered. Only a man of large experience, and one accustomed, through teaching, to concise and exact methods of thought and expression, could accomplish the task; but Dr. Taylor has succeeded admirably.

After a short but pithy introduction, the author takes up specific infectious diseases, including in this classification, influenza, syphilis and tuberculosis. The following two hundred pages are given to diseases of the nervous system. Then follow in succession accounts of the diseases of the organs of respiration and of circulation, diseases of digestion, diseases of the ductless glands, lymphatic system and blood, diseases of the urinary organs, diseases of the organs of locomotion, and, finally, diseases of the skin.

The author is aware that in treating of diabetes under diseases of the kidneys, and of rheumatism and rickets under diseases of the organs of locomotion, he lays himself open to criticism. He has placed them where he has for convenience and provisionally, until a better understanding of their pathology makes a proper classification possible.

We have already spoken in warm praise of the book, and have only to add that it is just the one to put into the hands of a student who wishes to read up a subject while he is listening to lectures on practice; it is full enough to be clear without being full enough to confuse.

A COMPEND OF HUMAN ANATOMY, INCLUDING THE ANATOMY OF THE VISCERA. By Samuel O. L. Potter, M. A., M. D., Professor of Theory and Practice of Medicine in the Cooper Medical College of San Francisco, etc. Small 8vo, pp. 315. Fifth edition, revised and enlarged. Philadelphia: P. Blakiston, Son & Co., 1890. Price, $1.00.

The present volume includes in one the author's compends on "Human Anatomy" and "Visceral Anatomy" which were originally published in separate parts. The text as first published, has been somewhat amplified, and the number of wood-cuts increased by eighteen, so that now the whole number of cuts is one hundred and seventeen. In an appendix are given sixteen plates representing the nerves and arteries.

The book as it stands is a very complete compend of anatomy; indeed, if it were not for the arrangement, one might be justified in speaking of it as a small treatise on anatomy. We can recommend it to students, and to any of our readers who desire such a book.

Correspondence.

Work in the Woman's Hospital of Philadelphia.

To the Editor.

Sir: Apropos of the excellent Editorial entitled "The Modern View of Diseases of the Uterus" in the Medical and Surgical Reporter December 13, 1890, it may be of interest to your readers to learn something of the past year's work in gynecology at the Woman's Hospital of Philadelphia—not the "Woman's Medical College Hospital" as is often stated. The "Woman's Medical College of Pennsylvania" and the "Woman's Hospital of Philadelphia" are distinct institutions with entirely separate management, although with a common interest.

A review of the work in the Hospital for the past year shows that the tendencies of modern thought and the refinements of surgical science have materially affected its methods of procedure. Since aseptic sur-

gery has robbed the knife of its terrors, and an exploratory incision may be made, as every surgeon knows, without costing the patient the loss of even a drachm of blood, it has not been thought necessary to subject patients to a long-continued treatment in the dark, with palliative measures, before resorting to more radical means for discovering the true nature of their maladies, and the possibility of relief. Our proportion of abdominal sections is for this reason larger than that of previous years, although not really so large, as yet, as the number and character of the cases applying to us for relief would warrant.

Of 668 patients treated in the house, nearly 500 were gynecological cases, while 1,948 cases were treated during the year at the gynecological clinic alone. Of 56 laparotomies performed, 48 were for disease of pelvic origin. Six of these were ovariotomies; four were hysterectomies; thirty-one were for the removal of diseased uterine appendages; four for the breaking up of adhesions and correction of uterine displacements; one for the removal of a dermoid cyst; two for multiple puncture of cystic ovaries. Four deaths occurred among the number; three of them in cases of suppurating ovarian cystomata—in all of which general sepsis had existed prior to operation, from absorption of fetid pus which had long been incarcerated in the pelvis. The fourth death occurred a week after the performance of a successful hysterectomy in a patient with frequent severe hemorrhages from a bleeding fibroid. The patient had been thus bleeding for two years, and her anemia was extreme. Not an ounce of blood was lost during the operation. An autopsy showed a perfect condition of the abdomen, wound and stump. The heart was very pale with flabby walls, a small clot was found in one of the chambers. The stomach was somewhat enlarged and distended with flatus. The supposition was that death occurred from embolus, or interference with the action of a very weak heart caused by the pressure of the distended stomach. The case had been afebrile throughout. Death occurred within half an hour of the patient's complaint of pain in the region of her heart. How striking a comment do these four cases offer to the evils of delay in resort to operative procedure!

Among the cases of simple amputation of the uterine appendages, no deaths occurred. The results in the cases surviving operation have been, as a rule, most gratifying. In twenty-five cases of successful abdominal section this year, reported by me in the November number of the *Annals of Gynecology and Pediatry*, the results here in every case surpassed my expectations. All the cases in which pain existed have been entirely relieved, and the general condition of the patient has been greatly improved. I speak of this here, as reference was made to some of these cases in an article in the Reporter, August 16, 1890, when it was much too early after operation to make results worth recording. In an experience with about one hundred and twenty-five cases of abdominal section which have come under my immediate charge, I have always found a logical explanation where the operation failed to meet expectations. Either the operation had been undertaken too late to afford more than a forlorn hope, or the complications resulting from repeated attacks of inflammation had been found to be insurmountable, resulting in a partial and unsatisfactory removal of diseased structures, the remains of which continued to serve as a source of local irritation. Surgery must sometimes undertake desperate cases, and it loses prestige thereby. Of minor operations, 64 perineorrhaphies were performed and 30 trachelorrhaphies, etc., amounting in sum total to 155. Operations in general surgery and those performed in our obstetrical wards bring the number of house operations up to 306. The addition of the operations performed in the various departments of our Dispensary work makes the total number 731.

Electricity has been but little employed in the management of our cases during the past year; and this because of my honest conviction that, as yet, the laws governing the action of this subtle agent are too ill-defined to render its use safe in conditions of disease affecting the delicate structures to be found in the pelvis.

Five years' personal trial of the methods of electricity as advised by its advanced teachers, has led me to this decision. Although, as resident in the Hospital in 1882, I was taught to employ electricity to some extent for the relief of pain, the control of hemorrhage, etc., it was not until 1885 that the Apostoli methods were fully introduced here. It was then that one of our physicians visiting Apostoli's clinic in Paris and studying his methods, brought home with her various forms of electrodes

and appliances as recommended by him. The Managers of the Hospital generously supplied us with an excellent and expensive battery capable of giving a current of 150–200 milliampères, and imported a galvanometer said to be of the best make. Since then the literature of the subject has been carefully followed and every effort made to bring about the conditions which would favor success. The Apostoli electrodes have been used, the Apostoli clay-pads employed and Apostoli rules followed. Intra-uterine applications have never been relegated to assistants, excepting under my direct supervision and instruction.

A pupil of Apostoli, one of Dr. Chas. K. Mills, and one of Dr. Massey, who have at different times, had charge of our electrical clinic, may have occasionally given intra-uterine applications to dispensary patients; but as a rule, such applications have been confined entirely to house patients. For many months no intra-uterine applications have been permitted to be employed in dispensary work. The result has been that in our hands electricity has proved an uncertain, unsatisfactory and at times a treacherous agent. Among a large number of cases treated, I cannot recall one we could consider permanently cured by its means. Relief of pain for variable periods of time with the occasional control of hemorrhage, has been obtained while the patients continued under treatment. Repeated attacks of inflammation have occurred, notwithstanding precautions. These, taken in time were readily suppressed; but that they left their impression upon the peritoneum was very evident in several instances where a final resort was had to laparotomy. A special proneness to the occurrence of omental adhesions I have found in many cases. One case of fibroid will perhaps serve as an illustration. The patient was admitted to the Hospital in February, 1886, when the record states her condition to have been as follows: "A large fibroid mass, *very movable*, apparently interstitial, fills the pelvic brim and extends to one inch below the umbilicus; cervix effaced."

From February 19 to September 7, 1886, the patient was treated by galvano-puncture, alternating with intra-uterine applications, according to Apostoli's method. After her last treatment on September 6, 1886, I find the following entry: "Tumor about the same size as when patient came in, the severe paroxysmal pains from which she has suffered continue to recur." On June 16, 1887, the patient returned to us. The tumor was found to be wider laterally than it had been before, and the amount of pressure it exercised brought the body of the uterus down in the anterior *cul-de-sac* to within 1½ inches of the vulva. The patient remained with us under electrical treatment until August 26, 1887, when she was discharged, materially in the same condition as when she came. She returned for the third time to the Hospital on December 31, 1887, when she was seen by Dr. Granville Bantock, of the Samaritan Hospital, London. Dr. Bantock thought the case unfavorable for operation, because of the fixation and lateral developments of the tumor. Treatment with electricity was again begun, but it was continued only about one week, domestic difficulties calling the patient home. Her extreme distress, and the fact that the tumor was greatly increasing in size, so that it now reached almost to the diaphragm, led her to return to us for the fourth time on December 13, 1888. She begged to have an attempt made for its removal. An exploratory incision was performed on December 29, 1888. The tumor and all the contents of the abdomen were a conglomerate mass of adhesions, so that removal was an utter impossibility. A few parietal adhesions were broken up and the abdomen was closed.

This sad life was terminated by death from sepsis due to breaking down of the tumor early in the spring of 1890, after the most intense suffering.

Since the discovery of truth should be the aim of all earnest workers, and the free discussion of medical topics can alone stimulate the intellectual processes essential to the development of science, I trust the expression of my views concerning electricity will not be regarded as a personal attack upon any of your readers who may hold different opinions of its claims.

Experts in electricity will indeed confer a blessing on humanity if they can prove that by the use of this agent disorganized tissue can be restored to its original conditions and functions. Reconstruction is to be preferred to ablation. Ordinary conditions of beginning inflammation are not those which baffle the skill of the gynecologist. The vicious conditions of life and thought which render pelvic disease so prevalent in this day, result in maladies so various and complicated that human skill is appalled at the difficult task of undertaking their cure.

The wise control of preventive medicine may in time lead to the extinction of such maladies; but as they exist, the important question is: How shall they be managed?

It is a difficult thing for any physician to advise a patient to shut herself out from the possibility of experiencing the joys of motherhood, and it can only be done when one feels the conviction that disease has already rendered *safe motherhood* an impossibility to her.

In our Hospital, where we are accustomed to explain to the patient and her friends the full nature of any operation with its results, and obtain from them a written statement as to their desire to have the procedure carried out, before it is attempted, I have yet to find the man who has not been willing to sacrifice every other consideration to his wife's good. It has oftener been the woman who has hesitated or deliberately chosen a life of suffering with a possibility perhaps of sudden death, rather than accept the alternative of a childless life.

Very truly,
ANNA M. FULLERTON, M. D.,
Physician in Charge.
Woman's Hospital,
Philadelphia.

Powder Blower.

TO THE EDITOR.

Sir: In January, 1889, I read a paper on Diphtheria before the Practitioners' Club of this city, which was published in part by you in your issue of November 23, 1889. In this paper I strongly advocated the use of sulphur in diphtheria and tonsillitis, and quoted authorities in support of its claim to usefulness for hundreds of years.

After reading the paper I presented to the society an instrument I had constructed for examining the throat and introducing sulphur and other medicated powders, to take the place of quills, cut-off catheters, glass tubes, putty blowers, rolled-up paper, and the many troublesome makeshifts, that have always vexed the souls of doctors and nurses. It was accepted as a happy solution of the question, and has since been used with much satisfaction, especially as it has been found a great improvement on other tongue spatula for throat inspection. It consists of a small tube four or five inches long, with a spoon attached to it. The spoon is bent on itself to pass over the tongue and shove it forward, and is highly polished to illuminate the parts, and is to be washed in boiling water to prevent contagion. The powder is to be blown through the tube by the mouth, or any powder blower.

A year's experience has demonstrated its usefulness, and also shown its possible needs. To make it complete, I have now added a rubber ball, with a scoop attachment, which makes it a firm continuous instrument to be used with one hand. And to make it still more complete, a tube with a bulb is to be attached to the ball and scoop, for nasal insufflation or irrigation.

These attachments also greatly enlarge its use; and since aristol has given such an impetus to powder medication of the nose and throat, the instrument seems to promise usefulness in the treatment of acute or chronic catarrh, as well as of diphtheria and tonsillitis. But the little illustration sent—which please have your printer place in your advertisement columns—will tell the story better than pages of fine print.

Yours truly,
J. D. OSBORNE, M. D.
1034 Broad Street,
Newark, N. J.

QUESTIONS AND ANSWERS.

[In this department will be published questions on any medical subject by readers of the REPORTER, and answers by the EDITOR or by other readers.]

Difficulty in Micturition.

DR. GILES LUCAS, of Alma, Ark., writes for information about the following case. Mrs. J., seventy years old, the mother of two children, of nervous temperament, and rather active for one of her age, consulted him in May for the relief of the following trouble. She said that for the last ten years she had been troubled at intervals of from ten days to several weeks with spells of painful and frequent micturition. The spells lasted from two to ten days. During the spells she suffered constantly with throbbing pain about the neck of the bladder. When she voided urine—which she was compelled to do every fifteen or twenty minutes—the pain was almost unbearable.

On examination, Dr. Lucas found that the urethra was very sensitive about the sphincter of the bladder, and there was some resistance to the passage of the catheter. There was no morbid growth or other abnormality. The introduction of

the catheter gave her so much relief, that she frequently calls on him to repeat it. The introduction of the catheter, or sound, and the local use of morphia, are the only means that relieve her. Her urine is normal. This case has given Dr. Lucas great anxiety, and any information concerning it will be gladly received.

Notes and Comments.

Depopulation of France.

It is somewhat startling to find that the depopulation of France is becoming a common subject of discussion among the *savants* of that country. The phrase is perhaps somewhat stronger than the circumstances of the case warrant, the fact being that the population of France is simply stationary. Still it is a striking and significant circumstance that while the population of all the other great European nations is steadily and rapidly advancing, that of France remains at a standstill. On economic grounds this arrest of increase in number might seem not altogether an unmixed evil, inasmuch as it should tend to diminish over-competition, and to ease the already excessive struggle for existence among the lower classes; but an impression widely prevails that given a fairly normal and healthy social condition a growth of population is a natural result, and that a stationary or declining population is an index of some grave disorder of the body politic. We cannot adequately discuss this large and difficult question, but our French neighbors evidently think that something is amiss, and are looking around for the cause and for its remedy. Probably the causes are numerous and complex. Social habits may account for a good deal. The French custom of subdividing land and of providing a dowry for girls offers an obvious motive for keeping down the number of children. Where, as in the west of Ireland, the peasantry have a cheap food supply, and are constitutionally averse to thrift, large families are the rule; but in France thrift is a virtue carried almost to excess, and the obligation of the parents to provide for each new accession to the family is clearly recognized. Moral causes have been supposed to play a large part in the arrest of the population of France, and we are far from under-estimating their importance, but this is a difficult and delicate problem, on which it would be rash to dogmatize without the most ample evidence.

While some of the causes of the phenomenon under discussion may be obscure and remote, others lie under our eyes, and cannot be too carefully scrutinized or too frankly acknowledged. In a recent address before the Académie de Médicine, Dr. Brouardel, drew attention to the abnormal mortality from small-pox and typhoid fever which prevails in France. He points out that while Germany loses only 110 persons per annum from small-pox, France actually loses 14,000. Dr. Brouardel attributes this astounding difference to the rigid way in which vaccination is enforced in Germany, and to the carelessness of his own countrymen in this matter. Statistics show that in 1865, when vaccination was not obligatory in Prussia, the mortality was 27 per 100,000 inhabitants. After vaccination was enforced the mortality fell in 1874 to 3.60 per 100,000, and in 1886 to 0.049. At the present time the mortality from this cause in France is 43 per 100,000. We make a present of these figures of Dr. Brouardel to the Royal Commission on Vaccination.

As regards typhoid fever the deaths due to this disease in France amount to 23,000 per annum. Dr. Brouardel gives a great variety of statistics to show that the liability to typhoid is in direct proportion to the imperfections in the water-supply, and that in proportion as a sufficient supply of pure water is provided, typhoid abates. Thus, at Vienne the typhoid mortality was 200 per 100,000 while the inhabitants drank surface, hence often polluted, water; but this mortality fell to 10 per 100,000 on a thoroughly good supply being obtained. At Angoulême the introduction of a new supply of pure water reduced the number of cases of typhoid in the proportion of 0.063 to 18. At Amiens, among the military population, the typhoid mortality fell from 111 per 10,000 to 7 when a pure supply of water was secured by artesian wells. At Rennes the inhabitants formerly drank from contaminated wells, with the result that typhoid fever was always endemic. The introduction of pure water reduced the deaths from typhoid among the military population from 43 per 10,000 to 2. Investigations carried out at Besançon, Tours, Carcassonne, Paris and Bordeaux entirely corroborate the above striking figures. Typhoid fever is responsible for the deaths of 1 soldier in 335 in France, or 298 per 100,000, and this in time

of peace. In war its ravages are even far greater. Thus the expeditionary corps to Tunis in 1881, consisting of 20,000 men, had 4,500 cases of typhoid with 884 deaths.

Dr. Brouardel concludes by affirming that if vaccination and re-vaccination were rendered obligatory in France, and if the towns were everywhere supplied with pure water, the country would save from 25,000 to 30,000 lives annually, and these, for the most part, of young persons of marriageable age. He therefore proposes to the Academy to adopt the following conclusions: "That the sanitary law in preparation ought to render vaccination obligatory; it ought to furnish sufficient authority to the municipalities, or in their default the Prefect or the Government, to secure the public health against the dangers which result from using polluted water."

In the discussion which followed Dr. Brouardel's communication many important points were elicited. One speaker drew attention to the evils which arose from cheap lodging-houses. Another insisted upon the superiority of supplying pure water to any methods of filtration. At Angoulême filtration was tried with some advantage, but the provision of a pure supply proved much more successful.

We may learn something from the anxieties of our neighbors. If the outcry against compulsory vaccination now prevailing in some quarters in this country should unhappily effect any slackening in our vigilance in this matter, we shall surely pay the penalty in a heavier mortality from one of the most loathsome of diseases. The example of Germany in this matter is admirable and cannot be too widely known or too carefully followed. The provision of an absolutely pure supply of water to our large cities is a much more difficult problem than the thorough enforcement of vaccination, but it is at least the ideal towards which our efforts must be directed. It is an immense gain to know positively both the source of danger and the means of averting it, and we must never rest content so long as an acknowledged source of disease, misery and national weakness is permitted to exist in our midst.—*Lancet*, December 20, 1890.

Apomorphia.

In the *Medical Record*, December 6, 1890, Dr. J. S. Horsley, of West Point, Ga., has an article, in which he advocates the use of apomorphia to control spasmodic seizures of various kinds. He describes the results which followed its administration in four cases under his care, in all but one of which it is probable (in our opinion) that the effect was wholly due to the relief produced by vomiting.

However, we may quote what Dr. Horsley says, so that he may speak for himself. He says he could mention other cases illustrative of the beneficial effects of apomorphia, but he thinks the cases cited sufficient to present this new use of the remedy; that of preventing and controlling convulsions, and other motor disturbances. He has seen so little written on the uses of apomorphia and that usually in relation to its action as an emetic, that he concludes that it is not appreciated at its full value by the profession. He has not been able to find any report of the use of apomorphia in motor disturbances for other than the relief to be expected from emptying the stomach, except a case in which a German physician succeeded in cutting short epileptic attacks by the subcutaneous injection of apomorphia during the aura; while Dr. Edward Cockrell, of England, is reported to have successfully treated infantile convulsions by its use. It is not stated whether the convulsions resulted from gastric disturbance or not; but as that is the usual cause of convulsions in children, we may suppose that its emetic action was sought in this case. The remedy has hitherto been used principally for its emetic action, and this was Dr. Horsley's object in using it, until he accidentally found that it controlled the spasms produced by strychnine poisoning. Since that time he has been using apomorphia for all convulsions, and in no case has he yet been disappointed as to the result. He calls attention to the fact that it arrests or prevents spasms and other motor disturbances. From the results obtained from its use in his limited experience, he confidently expects it to control any spasm not caused by lesion of the brain or spinal cord.

It is quite probable that this remedy will be of service in controlling the spasms during an attack of tetanus or rabies. He has had no opportunity of testing its value in either case, but from the analogy existing between these affections and poisoning by strychnine, Dr. Horsley thinks we might reasonably give it a trial in these affections.

Pathological Anatomy and Pathogeny of Ecthyma.

Leloir and Vidal discuss the pathological anatomy and pathogeny of ecthyma at considerable length in the *Gazette Hebdomadaire*, November 15, 1890. They define ecthyma as an auto-inoculable and inoculable disease of the skin, characterized by large, round, globular pustules with a hard base, the pustules being succeeded by brownish crusts which leave on falling off more or less apparent cicatrices. Vidal believes that he has to a great degree contributed towards establishing the fact that ecthyma is a disease by itself, distinct from impetigo and other diseases. It always leaves an indelible trace, a cicatrix more or less depressed and apparent according as the chorion has been more or less injured. Leloir and Vidal have inoculated skin and mucous membranes with the pus from various tissues and inflammations and have invariably failed to produce ecthyma. On the other hand, the pus from true ecthyma, when inoculated or auto-inoculated, reproduces a characteristic ecthymatous pustule, which reaches its height on the fourth day; and, from this one, another series of pustules can be obtained, up to five successive generations. Exceptionally a sixth generation can be obtained, but usually the reproductive power lessens with each successive crop.

Simple ecthyma usually runs an acute course. Its duration, which is ordinarily a few weeks, can be abridged by treatment to a few days. If uncared for, and in debilitated persons or such as are addicted to alcohol, it may pass to a chronic state, either by successive auto-inoculations which perpetuate the duration, or by giving place to chronic ulcers.

If it appears probable that in a certain number of cases at least ecthyma is caused by the entrance of micro-organisms into the epidermis, this has not yet been demonstrated absolutely. Up to the present time no one, as far as Leloir and Vidal know, has succeeded in producing ecthyma by inoculating cultures more or less pure of its micro-organisms. Possibly the alkaloids produced by the organisms are also necessary. But the question of causation is more complex than it seems at first sight, for lesions having all the characteristics of ecthyma have been seen to follow affections of the nervous system. It is also certain that in a number of cases ecthyma is produced by toxic chemical agents coming from without, and, in certain cases, perhaps, secreted by the organism and eliminated by the skin; but Leloir and Vidal do not say whether or not they consider these agents sufficient to provoke suppuration in the absence of micro-organisms.

Influence of Tobacco-Smoking on the Stomach.

In the *Vratch*, No. 48, 1890, p. 1091, Dr. N. I. Jdan-Püshkin, of St. Petersburg, writes that in order to study the action of tobacco-smoking on the gastric functions, he has undertaken a course of experiments on seven healthy young men, aged from 17 to 27, all of them being habitually non-smokers. In each instance, the experiment lasted nine days, being divided into three equally long periods, during the second of which the subject was smoking 25 cigarettes a day. Briefly told, the following conclusions were reached by the author. 1. Tobacco-smoking increases the secretion of the gastric juices, but at the same time lowers its general acidity. 2. It also decreases the proportion of free hydrochloric acid in the juice, and that in a direct ratio to the fall of the general acidity. 3. The diminution of the proportion of free hydrochloric acid, as can be expected, leads to weakening of the digestive powers of the juice. 4. Tobacco-smoking retards the secretion of the rennet-ferment (Hammarsten's *Lab-ferment*), as shown by a marked retardation of curdling of milk after the addition of the juice. 5. All the changes prove to persist for a couple of days after discontinuing smoking. 6. The motor and absorptive powers of the stomach, however, are somewhat increased by the use of tobacco [meanwhile Drs. Tcüdnovsky, Grammatchikoff, and Ossendowski have found that smoking retards the passage of food from the stomach into the duodenum.—Reporter]. 7. Smoking does not manifest any influence on the acidity of the urine. On the whole, the author seems to entertain rather unfavorable views in regard to tobacco-smoking. Amongst other things, he points out that the weed depresses the assimilation of proteids (as Grammatchikoff's and Ossendowski's experiments have shown), raises the bodily temperature and accelerates the pulse (Prof. I. V. Troitzky), causes sometimes dyspepsia, constipation, meteorism and other gastro-intes-

tinal disturbances (Treumann, Dubois), produces cardiac neuroses, failure of vision, etc., etc.

Micro-Organisms in Cities.

Professor Tarnier in his course of lectures on obstetrics, in 1890, referred to M. Miquel's researches on the relative abundance of micro-organisms in different places. One to the cubic meter of air is the proportion at the top of a high mountain. In the Parc de Montsouris in the south of Paris, M. Miquel found 480 micro-organisms to the cubic meter of air, whilst in the Rue de Rivoli the proportion was 3,480. In a new room in the Rue Censier he found 4,500 to the cubic meter; more, that is to say, than in the centre of Paris in the open air. In a room in the Rue Monge, he counted 36,000, in the Hotel Dieu 40,000, and in the Pitié, an older hospital, 319,000 micro-organisms to the cubic meter. At the Observatory Montsouris, 650,000 microbes were found in a gram (15 grains) of dust; in the room in the Rue Monge the amount was 2,100,000. In the hospitals the proportion was so high that counting the number of microbes in a whole gram of dust was found to be impossible. The dust is the great conveyor of micro-organisms. At 2 A. M., when a city is most quiet, the fewest germs are to be found in the air; at 8 A. M. the industry of domestic servants and dustmen has already made the air to teem with germs. At 2 P. M. the proportion has again greatly fallen; at 7 P. M. it is once more high, for many houses are being "tidied up"; besides sundry kitchen operations are unhygienic. Thus the "small hours" unfavorable in many respects to patients hovering between life and death, are the least septic of the twenty-four. The day proportions indicate that household duties cause more septic diffusion than is excited by traffic and industry.—*British Medical Journal*, November 15, 1890.

"Antifebrinization" in Typhoid Fever and Consumption.

According to the *Wiener med. Presse*, October 19, 1890, Dr. Favrat has made numerous trials in the clinic of Prof. Sahli, of Berne, of "antifebrinization" with minute doses of antifebrin. He communicates a paper on the subject to the *Archiv für klin. Medicin*, Bd. 46, and recommends the practice in typhoid fever and consumption. He says that antifebrin in doses of from five to ten centigrammes (¾ of a grain to one and one-half grains), is well borne by patients with typhoid fever and phthisis. It produces a gentle antipyresis which is grateful to the patient, and, administered in the way just mentioned, to a great degree the evils of large doses are avoided. In children it is proper to begin in all cases with doses of one-sixth or one-third of a grain. In typhoid fever the administration of the minute doses in the way described causes a lowering of the fever and an improvement in the subjective sensations of the patient. The hectic fever of phthisical patients is also overcome and the patient made more comfortable. The remedy acts better the higher the fever. In phthisical patients a dose of from five-sixths of a grain to one and one-half grains sometimes suffices to depress the temperature more than three and three-fifths degrees Fahr. In cases in which antipyresis is long continued the patient becomes gradually accustomed to doses that were at first effective. It is then best not to increase the dose but to stop the remedy for a time or to substitute another for it. Later on the doses used at first will again be found effective.

Abortion for Vomiting of Pregnancy.

Dr. Henry Fruitnight, of New York, in the *American Journal of Obstetrics*, December, 1890, gives a review of the subject of inducing abortion for the vomiting of pregnancy, with description of cases, and says:

"From these histories the following deductions can be drawn: First, that when nature spontaneously interrupts the course of pregnancy by the occurrence of premature delivery, the patient recovers. Secondly, that when pregnancy is allowed to proceed uninterruptedly to its natural termination, an almost certain fatal result will befall both mother and child. Thirdly, that when the patient, the victim of grave vomiting, is permitted to advance too far in the course of pregnancy before the operation of induction of premature labor is done, the probability is that she will not be able to resist the added shock of the operation in her already debilitated condition, but will succumb. Fourthly, that when the operation is done *secundum artem*, at the properly elected period of time, the probability is that we will save the life of the mother in

any event, and in many instances, in proper cases, the lives of both mother and child. And upon these deductions the following conclusion is based: When hyperemesis seriously and dangerously affects the health of the woman, and does not respond to a judicious and systematic course of treatment with all known and approved remedies, then the operation of the induction of premature labor in such cases is at once justifiable and the only thing left for us to do."

Women and Women Physicians in India.

The *Indian Medical Gazette*, November, 1890, says that the native women frequenting the Balrampur Hospital, Lucknow, are so much behind the age that they elect the services of male in preference to female doctors. This is what Dr. Rice, the Inspector-General of Civil Hospitals, says on the subject:—"With regard to the 934 major surgical operations done in the female hospitals, it is but right that I should state that the large majority of them have been done by the Civil or Assistant Surgeons, and this is right generally. The greater part of them are of a nature unconnected with the sex of the sufferer. I have myself seen women insist that the operations should be done by the male doctor: and not only that, but that they should be done in the male hospital, so as to make sure of his operating. The principle of management is that, as far as we are concerned, every women shall be left a free agent in the selection of the particular division of the hospital in which she shall be treated."

Hydrate of Amyl in Epilepsy.

In a recent number of the *Therapeutische Monatshefte* the experience of the use of this drug in doses of from five to eight grams per day, in the cases of seven epileptics, is related. Two of the patients, previously subject to from nine to eleven attacks per month, remained free from them as long as the drug was taken; in a third improvement seemed to take place at first; in the remaining four no appreciable effect was produced on the number or severity of the fits. In all seven there was produced by the drug a great desire for sleep, and after it was left off the rest was disturbed; and in cases in which previously sleep had been sound and undisturbed, it now became light and broken. In three patients, also, after the medicine was left off, there were for several days series of fits, although those patients previously had not, as a rule, had more than one or two convulsions in the day.

A Laryngological Curiosity.

The *Medical Press*, December 3, 1890, states that at a recent meeting of laryngologists in London, Mr. Lennox Browne described the case of a middle-aged woman who was sent to him from the provinces for the purpose of deciding whether her malady was laryngeal cancer or phthisis. Though a tall, large-boned woman, she only weighed a little over ninety pounds, and was obviously very much emaciated. He peeped down her larynx and to his surprise saw what he recognized to be a plate with artificial teeth firmly impacted in the larynx, where it had been for the last twenty-two months unknown to the patient. She remembered having been awoke in the middle of the night by a violent fit of vomiting, and when the teeth were inquired after it was assumed that they had been thrown away with the dejections. From that day forth, however, she suffered from difficulty in breathing, pain on swallowing, etc., associated with progressive emaciation. With some difficulty the plate was removed and exhibited to the admiring friends, and the patient rapidly recovered health and spirits.

Raori Resin.

The *Druggists' Circular*, December, 1890, says that a report from Noumea, by M. Formet, speaks favorably of the use of Raori resin —otherwise called Sydney gum or Caledonian balsam—as a suitable medium for the external application of antiseptics. It forms a coating over wounded surfaces. In cutaneous affections it is of great service; and also in the treatment of sprains and fractures when the limb must be kept rigid.

Disguise for Cod-Liver Oil.

A mixture of equal parts of cod-liver oil and lime-water is said to be nearly tasteless, but may be made more palatable by the addition of an aromatic syrup.

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Clinical Lecture.

VAGINITIS; ITS CAUSES, DIAGNOSIS AND TREATMENT.—DIAGNOSIS OF DEATH OF FETUS IN UTERO.

BY E. E. MONTGOMERY, M. D.,

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Gentlemen: Our first patient is a colored woman, thirty-five years old. She presents the following history. Her mother died of phthisis, and she herself was never very strong. She menstruated for the first time at sixteen; the flow was full, free, painless, and lasted on the average for three days. She has had four children, all living and well, has never had a miscarriage, and there is no history of venereal trouble. She menstruated the last time, the eighteenth of this month; after the cessation of the flow she felt sick and weak, and had considerable pain in the lower part of the abdomen, attended with a vaginal discharge, purulent in character. Her appetite is poor; her temperature on admission was between 102° and 103°, and has since ranged a little lower. Her abdomen is distended and tender, although there is no increase in tenderness upon pressure. Upon separating her limbs we see that the vulva is red in color, large, and with the posterior wall of the vagina protruding through it. The perineum, usually an inch and a half in length, is here only about half an inch long. The walls of the vagina are red and angry looking, showing at a glance that there is inflammation of the vaginal mucous membrane.

Inflammations of the vagina are divided into acute and chronic, specific and non-specific, catarrhal, diphtheritic, follicular and granular. Before entering upon the discussion of the symptoms and causes of the disease, it is well that we should devote a short time to the consideration of the anatomy of the vagina. The vagina, as you know, is a passage which leads from the vulva to the uterus. It is a musculo-membranous canal, and serves as the organ of coition and to convey the discharges from the uterus, and also affords passage for the fetus in parturition. Its wall consists of three layers—an outer layer of areolar tissue, a middle or muscular, and the internal, or mucous membrane. The mucous membrane is lined with pavement epithelium, resembling very closely that of the integument; this resemblance is still more marked where the vagina is exposed to the air or to friction with the clothing or limbs. The mucous membrane of the uterus has a columnar epithelium, this terminates at the external os. The mucous membrane of the vagina is thrown into folds called rugæ. Under inflammatory conditions, the swelling of the mucous membrane leads to the obliteration of these folds, and the outer layer of the epithelium is thrown off, so that it presents a smooth, glazed appearance, and imparts to the finger the sensation of passing over velvet or satin. In such inflammation we find: First, the mucous membrane becoming dry, hot and glistening; later there is increased secretion, the discharge presenting a whitened appearance from the presence of desquamated epithelium, or it is yellowish and greenish from the presence of pus and broken down blood. These latter conditions occur where the desquamation has gone on to the formation of points of ulceration.

Vaginitis may be caused as follows: First, from contact with specific poison; second, from the contact of various mechanical agents, such as may be used in the vagina for disinfecting or examining; third, from traumatism due to parturition, excessive or violent coition, or by the use of the

pessary; fourth, discharge from the uterus or sinuses, from abscesses opening into the vagina, such as pyosalpinx, or from the sac of an extra-uterine pregnancy.

In this patient the cervix is hard and firm, the body of the uterus is less resisting and is somewhat enlarged and flabby, it sags down from its increased weight, so that it is sometimes felt in a retroverted and at other times in an anteverted position. The tympanitis and tenderness show that there is threatened pelvic trouble, and extension of the trouble through the uterus into the Fallopian tubes, suggesting a possible peritonitis. This is still further demonstrated by the temperature and constitutional symptoms.

It is very difficult to distinguish between specific and non-specific vaginitis. Frequently the use of the microscope is essential to demonstrate the presence or absence of the specific micro-organisms in the discharges. It is not necessary that the discharge be specific in order to be infectious. Urethritis in the male may be easily developed by contact with the discharge from an endometritis. In this patient the condition is, without doubt, non-specific, from the rapidity with which the symptoms are subsiding under the simple method of cleanliness, which has been used. If it were specific, so marked an improvement would not occur so rapidly, or under such simple treatment. The purulent character of the exudation shows that the following process has occurred: the desquamation of the epithelium was followed by its decomposition, which, in its turn, produced inflammation, resulting in ulceration; the watery, milky discharge became yellowish and greenish in its appearance, and more viscid in its consistency. Bumm, in his investigation of the subject, has come to the conclusion that the vagina is rarely or primarily the seat of the specific infection; because the pavement epithelium, in its normal condition, proves a resisting wall to the entrance of the germ, while the columnar epithelium in the cervix affords a much more ready opportunity for its entrance, and is the common seat of its origin, while, from this point, it spreads to the vagina. Where the vagina has been the seat of repeated inflammation, a new inflammation sets up more quickly and extends with greater rapidity. On the other hand, the inflammation is more likely to spread to the uterus and tubes; and it is for this reason that we find tubal disease so frequently as a result of specific disorder. I would not wish to be understood, however, as affirming that all causes of tubal and ovarian trouble are due to specific origin; it is unjust to the character of many of our patients to assert this. Exposure to cold or dampness, the introduction of septic material through examination, either by the finger or by the use of instruments, may readily produce similar disorders in a patient who has been subjected to an inflammatory condition of the tubes, and who is very susceptible to recurring attacks upon the slightest exposure. Catarrhal inflammation in the tubes leads to increased discharge. So long as this can make its exit through the uterine end, the patient suffers but slight inconvenience; when the latter becomes contracted, as a result of the swelling of its mucous membrane, the discharge is likely to regurgitate into the peritoneal cavity, where it leads, at once, to inflammation which seals up the abdominal end of the tube. A sac is thus formed in which fluid is likely to accumulate, producing a condition known as hydrosalpinx. If septic germs, by any means, come in contact with it, we may have the fluid change, producing a pyosalpinx. Where the distended vessels rupture, and the tube becomes filled with blood, it is known as a hematosalpinx. As a sequel to inflammations which have extended from the vagina, we may have an irritable condition of the peritoneum at the tubal orifice, which is excited at each menstrual period, producing abdominal pain and tenderness similar to the irritation of the upper lip and margin of the nose from a catarrhal condition of that organ. Another possible sequel is extra-uterine pregnancy. Under the inflammatory process, we have the mucous membrane losing its ciliated epithelium, producing denuded points, or again the Fallopian tube is flexed, constricted, or so bound down as to have lost its peristaltic action, and the passage of the ovum to the uterus is delayed or hindered. On the other hand, the spermatozoa may find their way through the tube to the delayed ovum, leading to its fecundation and development in this situation. This is the theory for the development of tubal pregnancy. The advocates of this theory deny the possibility of abdominal pregnancy, except as secondary to rupture of the tube and escape of its contents into the abdomen. It does not, however, seem any more difficult to believe

that the ovum, having been fecundated in the abdominal cavity, may find opportunity, possibly from the previous irritation of the peritoneum, for its nutrition and development, than that the contents of the tube should take on new attachments after they have ruptured that organ. The possibility of abdominal pregnancy has been demonstrated in a case in which the uterus was removed supra-vaginally, an ovary having been left. Pregnancy occurred in this case and led to the death of the patient.

In the treatment of vaginitis, many cases are relieved by no other measure than strict attention to cleanliness, as in this patient, for whom the treatment has been simple washing out of the vagina with hot water, or hot water containing boric acid, which has here led to the subsidence of all the symptoms. Inflammation may be kept up by the want of removal of the exudations; frequent irrigating removes this material. In more severe inflammation of the mucous membrane, irrigation with astringent remedies is very beneficial. Avoid syringes which force the water with violence into the vagina. Use in preference a fountain syringe, placed about three feet above the patient, and allow it to be used while she is in a sitting or semi-sitting position, to permit a free return of the fluid, whereby ballooning of the vagina is prevented. Inject several times, two quarts of water at one sitting. Keep the nozzle of the syringe below the uterus, and move it about, this precludes the entrance of water into the uterus, which might give rise to violent attacks of uterine colic and increase the danger of septic material being washed into it. One of the most effective preparations for injection is a sublimate solution in the strength of 1, 2, 3 or 4 to 1,000; which may be followed by some astringent, such as sulphate of zinc—40 to 60 grains to the quart. Acetate of lead, gallic acid, tannic acid or extract of hydrastis (which is another form of tannic acid), may be used. If the removal or sterilizing of the discharge is incomplete, it is important to supplement this treatment by placing the patient in the Sims's position and go over the mucous membrane with a mop, containing some such agent as nitrate of silver, in a two per cent. solution. By the use of a Sims's speculum it is possible to reach the summit of the posterior and anterior fornices of the vagina, and the posterior surface may be reached as the instrument is withdrawn. In very many cases the application of the remedy with a spray is a very effective method, as the evenly-divided material is driven into the cracks and crevices not touched by the mop.

Where extensive ulceration exists, still further treatment is essential. The vagina must be tamponed to keep the surfaces apart. Gauze is the best agent for this, and that made with iodoform is the least irritating. This can be packed in lightly, or the whole vagina may be plugged. The gauze can be placed in dry, or wet with some antiseptic solution.

In follicular vaginitis this treatment does not suffice. In such cases we find the true layer of epithelium is gone, and in its place is a growth of papillæ. It is necessary to destroy these papillæ. Generally the best agent for this purpose is the thermo-cautery.

There is a form of granular vaginitis which is apt to occur in women of intemperate habits, especially if they have passed the climacteric. It is in reality a senile vaginitis, and is likely to proceed as long as indiscretions in diet and drinking are kept up.

Vaginitis is likely to appear in plethoric subjects with a gouty diathesis. In the latter case all blood conditions must be improved. In all cases, remember that there is danger of extension if the case is not properly treated. In displacement of the uterus its cavity may be dilated. Its contents are not freely drained, and may be discharged at intervals, giving rise to the impression on the patient that she has had an abscess discharge. This material is exceedingly irritating, and invariably gives rise to inflammation of the vagina.

From what I have said of the cause and treatment of vaginitis, you will readily perceive the importance, in every case, of examining carefully as to the conditions which may have originated it, and of directing your treatment to correction of the conditions by which it has been caused. This demonstrates that you cannot divorce the special from the general practitioner without disadvantage to the doctor and patient.

Death of Fetus in Utero.

Our next patient is another colored woman, twenty-three years old. She has always had good health, and seven years ago gave birth to a child at seven months. Since that time she has been regular. She saw her menses last in March of this year. She has suffered with nausea, which was

brought under control; and movements of a fetus were felt in August. But at each monthly period she has had a slight appearance of the menses. She has reached the seventh month of pregnancy, but the question we have to decide for her, is: Is her child living? She has felt no fetal movements for two weeks. The fetal movements are usually felt first at four and one-half months, so women are accustomed to reckon from this period four and a half months to the time of the expected confinement. This is, however, unreliable as a date, as movements have been felt, occasionally, as early as the fourteenth week; and Underhill has mentioned a case in which the patient felt the movements at the eleventh week. The first sign is a sliding, gliding, quivering movement, which usually gives rise to nausea, faintness or sickness. It has occurred, however, that the woman would go through the entire period without a single movement of the fetus. This is due to the fact that the fetus is held tightly in the membranes, which contain but little fluid, so that its opportunity for movement is slight. The absence of fetal signs is not, then, a positive indication of disease or death of the fetus. Ordinarily at the seventh month the fetal movements become stronger and more frequent. Sudden death of the fetus is often preceded by violent convulsive movements, followed by subsequent total cessation. This may be due to some disease in the fetus or in the placenta, or to twisting or knotting of the cord. When the fetus dies the abdominal walls become flaccid, and the fetus can be pushed from side to side without exciting any resentment. It lies perfectly passive, when before it would resist movement with a kick or blow. Another indication of death would be the absence of the fetal heart sounds. These sounds are not always heard. When the fetus is turned with its back to that of the mother, and does not approximate the anterior part of the abdomen, the fetal sounds may be absent, and the fetus still in a healthy condition. If the sounds have been repeatedly heard and then suddenly disappear, this, with the other suspicious symptoms, would justify us in suspecting the death of the fetus. This is especially true when external examination demonstrates the fact that the fetus is in such a position that its heart sounds should be readily heard. Fetal death is still further confirmed when the breasts of the mother become soft and relaxed. This indicates that Nature recognizes the fact that there will be no demand made on them for nourishment. As the dead fetus undergoes changes, auscultation may give sounds like crackling and bubbling, which arise from the generation of gas and its passage through fluids. The patient will also complain of constitutional impairment and lassitude. All these signs are present in the patient before us; so that I have no hesitancy in saying to her that the fetus is positively dead. The cause of her trouble is probably a fatty degeneration in the placenta, by which its vessels are interfered with, and nutrition is arrested. This trouble is due to a specific cause; the woman is syphilitic. [This patient was delivered a few days later of a macerated fetus.]

COMMUNICATIONS.

HYGIENE OF INFANCY.[1]

BY GEORGE N. HIGHLEY, M. D.,
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There is perhaps no single topic about which so much has been written and spoken as the care and management of infancy; and I should deem my subject too trite to bring before this Society, were it not for its great importance, and for the fact that each of us has to deal daily with the problems arising therefrom. Further, it is a duty which we owe to Science and, greater still, to Humanity, to constantly observe and study those facts which will aid us to pilot the little ones safely over that dangerous period, during which so many fall victims to disease and death.

With our advancing civilization Society is constantly making the infant's environment more unhealthy; daily making more difficult its struggle for existence.

Science is ever giving us new facts about the cause and nature of disease; but little progress is made in their prevention or their treatment. What does it avail that we are able to detect the cause of disease in living germs, so long as we allow to remain around us fertile fields for their propagation, and have no practical means of protecting the system from their deadly influence?

In dealing with the problem, how best to conserve the health and lives of the little

[1] Read before the Montgomery County Medical Society.

ones—we naturally turn our attention to those elements and conditions which experience has shown us to be deleterious to them. These are: excessive heat, impure air, water and food, improper kind of food and food improperly administered, errors in clothing, bathing, etc. I have purposely placed excessive heat first on the list, because its influence in the causation of the diseases of the digestive system of infants is greater than all the others combined, taking them as we usually find them. I do not underrate the evil influence of polluted air and water and food, and of improper and irregular feeding; these are bad enough, to be sure; but their harmful effects are decidedly mitigated by a cool atmosphere, so that in winter death from a diarrhœal disease is quite exceptional. On the other hand, the excessive heat of summer carries off many victims that have been nursed at the breast and have had their hygienic conditions as favorable as possible.

Cases like the following are of frequent occurrence. A child in the sultry summer weather becomes peevish and restless; its head is hot, its mouth and lips dry. The mother feels its gums and discovers that it is teething (it is well to remember that children are always "teething" during the first two years of life). Should the infant continue ill, a physician is summoned; if no diarrhœa or vomiting has occurred, he is apt to agree with the mother, prescribe a bromide or an opiate, or perhaps scarify its gums and pass on. If there has been stomach and intestinal derangement, he will likely inquire carefully into the character of its food, the methods of feeding, etc., correcting any errors in these. He prescribes some medicines, and expects that he will find it much better on the following day. Too often he does not; too often he finds it with a pinched, anxious expression, sunken eyes, cold extremities and with frequent vomiting and purging—in a word, that it has cholera infantum and that its chances of life are very slim. It is possible, perhaps probable, that a large number of the little patients affected in this manner would make a speedy recovery if early treated with cold affusion; and if their mothers and nurses but knew the important part that heat plays in causing these complaints and as diligently guarded their babes against the ravages of summer's heat as they do against the chilling influence of winter's cold, cholera infantum would have a great many less victims.

If the home is a one or two-story dwelling in a crowded street, unprotected by trees, or otherwise, from the glare of the sun, it is often a difficult matter to shelter the infant from the external heat. But even in the most unfavorable conditions, much can be done. The child should be dressed lightly—a light, thin woolen shirt (made of the finest lamb's wool if possible), neatly fitting and long enough to reach the hips, with a thin dress, is all the clothing required for the body. If the weather becomes cooler, more clothing can easily be added.

The child should also have frequent baths—not with wash-rag and soap and a basin of water—but immersed in a tub of water at a temperature of 85°, and less as it becomes accustomed to it. It should remain in the water only a few minutes, of course.

The infant should also be taken out regularly in the early morning and in the cool of the evening, to some locality where it can have a good supply of pure air. In the midday let it take its nap in the coolest and airiest room the house affords; if this is necessarily a hot one, the morning and evening rides and the cool baths will do much to enable its system to endure it.

The thought of pure air and water brings up questions in general hygiene that I need not enter into here; it will be sufficient to repeat a well-known truth, namely, if the streets, alley-ways and back-yards could be kept free from all decomposing organic matter, a most important factor in the etiology of disease would be removed.

The question of infant feeding continues to be one of supreme importance. High temperature and bad food are the two prime factors in causing the diseases that annually carry off so many little victims, and in a measure they depend each upon the other for their pernicious effect.

It is conceded by all that the natural diet of the infant—the mother's milk—is the best that can be given it. Of the large number of deaths from cholera infantum in our large cities, only three per cent. occur among infants fed at the breast, while over 90 per cent. are bottle-fed babies. Naturally it would seem that every effort ought to be made to help the mother nurse the child. I venture the assertion that the person who can invent or discover a remedy that will promptly cure an eroded nipple, will have invented or discovered a means of saving thousands of human lives.

The second best food for the child is un-

doubtedly cow's milk, modified so that it shall closely correspond in chemical composition to mother's milk. There have been numerous attempts at accomplishing this. Many mixtures have been devised, and the market has been flooded with patent foods, all claiming to be perfect substitutes for the milk of the mother. A careful comparison, however, will show that, in nearly all of them, there is a wide departure from the natural food. The following mixture, recommended by Dr. T. M. Rotch, in the *Cyclopedia of the Diseases of Children*, approaches as near to it as any that I have seen, and thus far it has answered well in the cases in which I have tried it. It is really a modification of what is known as the "Meigs Mixture," and is made as follows. For an ordinary 8-oz. nursing bottle: Milk, 1 oz.; lime water, ½ oz.; cream, 1½ oz.; milk sugar, ½ oz. (3⅓ drams); water, 4½ oz. The objections to this are, that at first its preparation seems a trifle troublesome, and, second, that it is somewhat expensive—a matter of some consideration to the poorer classes. It is, however, quite as easily prepared as many manufactured infants' foods, and does not cost any more—at any rate, it is much less expensive than a funeral.

There are other matters, quite as important as the kind of food, which should have careful attention. These are: the quality of the food and the quantity, and the method of its administration.

Pure, unaltered milk, no matter how it may be mixed, is absolutely indispensable to the well-being of the infant. If it can be procured shortly after it is milked from the cow, and placed on ice, that is all that is necessary. If it cannot be obtained until it has been carried around in cans for several hours, then it should be boiled and bottled—the mouth of the bottle being stoppered with a pledget of cotton—after which it is placed on ice, or in pans of cold water if ice cannot be obtained.

Having procured and prepared a good food, the next question is that of its administration. Errors in this are frequent and serious. Early the infant should be taught to want its food at regular intervals—never less than three hours. If this be carried out, errors in quantity will be little likely to occur. The child's desires will be a good index of how much it ought to have. The reprehensible practice of giving babies bottles with long tubes, and letting them alternately sleep and suck for hours, is so obviously bad that mere mention of it is sufficient.

Of the various methods of peptonizing milk, little need be said. For a baby whose digestion has been temporarily overtaxed, they may be used with much benefit for a short period. Used regularly, they do harm by seriously interfering with the normal digestion—diminishing the secretions of the natural digestive ferments.

The following rules of guidance seem to me to be as near correct as the present state of our knowledge will warrant.

Use every reasonable effort to have the mother nurse her child. If this is impracticable, endeavor to obtain a supply of pure cow's milk twice daily if possible. Use the best means possible to protect the milk from fermentative changes (or from bacteria if you choose). Modify it in the way that I have described, if possible; otherwise give it pure or simply diluted with water and a little lime water. Give it at regular intervals, and never at shorter intervals than three hours. A single feeding should not occupy over half an hour; nor, on the other hand, should the milk be taken too rapidly. After using, the feeding bottle should be thoroughly scalded and cleansed. Clothe the infant lightly in hot weather. Bathe it frequently, using soap sparingly. Keep it in the outside air as much as possible, especially in the early morning and in the cool of the evening. Above all, remember that heat is a most important factor in the causation of disease.

RESORCIN.

BY ALFRED EICHLER, M. D.,

SAN FRANCISCO, CAL.

Resorcin is an article deserving of more attention than it has hitherto received. It occurs in rhomboid prismatic crystals, white and shining in its pure state, with a sweetish taste and a somewhat pungent smell. If exposed to light or kept in a moist place it will soon acquire a reddish tinge, but it does not lose its activity. It is soluble in water and alcohol, also in ether. Solutions assume on standing a darker, whiskey-like color, without any impairment of their activity. In very concentrated solutions it acts as a mild caustic, if applied to mucous membranes; it does not irritate sound skin, however. When sufficiently diluted it seems to have a sooth-

ing effect on inflamed surfaces and also on the mucous membranes. Internally it may be administered in doses ranging from two to fifteen grains.

Resorcin belongs to the phenol group; its medicinal qualities therefore resemble somewhat those of carbolic acid. It arrests fermentation and decomposition, and hence possesses antiseptic properties like its congeners. It is to be preferred to carbolic acid in all instances when the latter proves too irritating. Consequently it is especially useful in all affections of the mucous membranes; it is then used in aqueous solution, largely diluted. A three to five per cent. solution is mostly preferred. In catarrh of the posterior nares and of the pharynx it is found to be an excellent application; it is also useful in all affections of the upper air-passages. Here it is preferable to almost any other antiseptic; an aqueous solution may be used ad libitum, and can do no harm if swallowed in ordinary quantity. This alone would be a good reason to prefer it to bichloride of mercury or carbolic acid; but it also improves the local conditions quickly and gives great relief to the patient. For this purpose it can be combined with other substances. A good formula is presented by the following:

℞	Resorcin	2 drachms
	Salicylate of soda	1 drachm
	Biborate of soda	1 "
	Glycerine	2 fl. ounces
	Water to	8 "

Mix and dissolve. S. Use freely three times daily.

This solution will soften and bring away all hardened secretion, relieve the congestion and lessen the usual discharge. For thus cleansing the naso-pharynx a posterior nares syringe should be used instead of a nasal douche, which in unskilled hands is very likely to create mischief, that is, inflammation of the middle ear. This can be caused by the patient performing the motion of swallowing while the liquid passes the orifice of the Eustachian tubes, connecting the naso-pharynx with the middle ear. During this act the tubes open and a small quantity of liquid may pass up into the ear and give rise to a severe inflammation. A posterior nares syringe will do the cleansing equally well, if not better, and does not endanger the patient.

In many other affections of the air-passages does resorcin give great relief. Whooping-cough, asthma, bronchitis and laryngeal ulcers are benefited by it. It is especially valuable in chronic ailments of this kind; it is of less use, however, in the acute affections, like croup and diphtheria. It should be applied in diseases of the throat with an atomizer spray or inhaling apparatus. A five to ten per cent. solution will serve all purposes.

Resorcin sometimes acts charmingly in other diseases of the mucous surfaces; it is an excellent injection in all stages of gonorrhœa, although it here also produces more benefit during the latter stages; in inflammation of the neck of the bladder it may also be employed. From two to five per cent. solutions will be the proper strength to use.

During the last few years some of the leading dermatologists have praised resorcin as an efficient remedy in various diseases of the skin, especially those of a fungous origin. It may be conceded that it does exert considerable influence in this way, but it must also be acknowledged that rosorcin is much inferior to chrysorobin in this respect. In very old skin affections, like eczemas of long standing, where the skin needs stimulation, it is quite useful and recommends itself by not producing any stains or other disagreeable consequences, besides being completely harmless.

Resorcin may be elegantly dispensed in ointments having lanolin as a base and containing from 10 to 20 per cent. of the active ingredients. It can also be applied dissolved in ether and collodion, and will then form an excellent antiseptic protective.

The internal use of resorcin is chiefly limited to producing its antifermentative action. In gastric and intestinal catarrh, dilatation and ulcer of the stomach and in all those diseases where gases are produced in the alimentary canal, its use is indicated. Impure resorcin is said to occasion vomiting, but, according to Andeer, pure resorcin is one of the very best and most certain remedies against vomiting, and he says that it will prove efficient in all possible forms of vomiting, as in those caused by pregnancy, kidney and liver diseases, also by sea-sickness and after excessive eating and drinking of alcoholic liquors. The doses as applied by him range from five to forty grains. It is most conveniently administered in capsules.

Resorcin has also been recommended, like many other antiseptic drugs, in the strictly septic states, like puerperal fever and

erysipelas. It is of little or no use for this purpose.

An advantage of this drug consists in the fact that aqueous solutions of resorcin possess no smell whatever, and also, that they may be combined with alkalies in any proportion without losing their antiseptic value.

FATAL HEMOPTYSIS FOLLOWING TYPHOID FEVER.

BY STANLEY M. WARD, M. D.,
SCRANTON, PA.

I have purposely abstained from entitling this communication hemorrhage, a sequel of typhoid fever (using the term sequel as it is commonly used in medicine, viz., as following or dependent on the antecedent disease) for two reasons: first, because of my utter failure to find anything like it in my search through the standard medical works and periodical literature of the day, and secondly, because the history of the case reveals peculiarities which some may think militate against this view. I have therefore thought best to term the hemoptysis a sequel only as regards *time*, though I am of the opinion that it was a sequel both as to *time* and *cause*.

History, personal and family of E. B., male, 21 years old. Habits excellent; works as a skilled laborer in a stove foundry, the air of which is said to contain minute particles of iron and steel; is catcher for a strong amateur base-ball club and is also an athlete. During the past three years at long intervals—just how many times is unknown—he has, after severe exertion, spat up a little blood. He never experienced any ill effects therefrom, and was always well and hearty. He works every day, and has lost neither appetite nor flesh. Mother—the only member of the family not living—died ten years ago of acute pneumonia. Has three brothers and two sisters, who, with the father, are perfectly well. On August 29 he had a general feeling of malaise, chilliness, headache, etc. Bowels a little inclined to be loose. Worked but half the day. On the 30th and 31st, these symptoms continued, though domestic remedies and fair sized doses of quinine were taken. He did not feel sick enough to remain in bed, but did not work. His appetite was nil. On September 1, he took a short trip, and was gone all day. On returning in the evening he remarked that he "never felt so tired before in his life." He arose the next morning, however, feeling much as he had before. I saw him at 2 P. M. of this day, having gained the information herein given. No record was made of the last blood spitting, but he thought it occurred some time in the spring. A careful examination of the chest revealed no lesions of heart or lungs—which somewhat surprised me. His pulse was 100, his temperature 102½°; he had had two passages from the bowels that day, he complained somewhat of pain on pressure over the abdomen. He also had some headache. The diagnosis was reserved. On September 3 his morning temperature was 101½°, and his bowels had not moved again. He had no cough. There were one or two poorly defined spots on his abdomen, and slight iliac gurgling. His mind was clear and he insisted that there was nothing the matter, except that he was tired.

I now diagnosticated walking typhoid fever, and put the patient to bed, ordering a liquid diet and a few drops of acid to be taken several times daily, also sponging with lukewarm water twice daily.

So, for ten days more his symptoms remained. Sometimes his temperature would reach 103°, and sink to 101° in the morning. Sometimes the bowels moved naturally, and sometimes he required a little glycerine to secure a stool. A few more spots appeared on the abdomen. Indeed, hardly a symptom was lacking of a typically mild case of typhoid fever.

On September 13, his temperature was 99°, and on the following day reached to normal, remaining there also at night. He now became very anxious to eat, and it was with some difficulty that his appetite was appeased. On September 16 he sat up and was partially dressed. On the next day he walked a little way out of doors, sending a message to me that his people were starving him. On September 20 he did not leave his room, complained of headache and coughed some; and these symptoms continuing, I was sent for in the afternoon. I found him in bed, looking anxious and tired. He felt certain that a relapse was to occur, and was much discouraged. His pulse was 120, his respiration 25, his temperature 103½°. A short, hacking cough was very presistent, and his lungs now showed signs of bronchial irritation, râles of every kind being plentiful. From all the rational and physical signs, I looked for an attack of

catarrhal pneumonia, and so expressed myself. He was ordered a lukewarm bath, and given eight grains of antifebrin, followed by a full dose of aromatic spirits of ammonia. At 9 P. M. his brother informed me that his temperature was 101½° and his breathing more easy, and also that he had raised some blood. He did not know whether the blood was mixed or unmixed with the sputa, and evidently thought the patient a great deal better.

I saw him at 8 A. M. the following morning. He was weak, looked ensanguinated, his pulse was feeble, 130, his temperature 103°, his breathing rapid. He was then expectorating nearly pure, red blood, and from the vessel in the room I judged he had lost nearly a pint. Recognizing the extreme gravity of the case, I requested Dr. L. as counsel. He joined me a short time thereafter, and recommended giving gallic acid in addition to the ergotine I had given hypodermically, with other approved measures. We went over the case from its incipiency, and though differing as to the exact cause of the hemoptysis—whether due to pre-existent lung trouble or a direct sequel of the fever—neither of us hesitated to diagnosticate pulmonary hemorrhage or to give an unfavorable diagnosis. The lungs were not hepatized, but the air produced a slushing sound as it passed through the bronchi and entered the ultimate lobules, as though they were partially filled with liquid. The patient gradually failed, and died of exhaustion at noon on September 22.

The question naturally arises: Was the hemoptysis dependent on the attack of fever through which he had passed? Unless this be answered in the affirmative, one is almost forced to conclude that the patient had phthisis prior to August, and was suffering from its ravages even while appearing hearty and well, exhibiting no symptoms, except a slight loss of blood after hard exertion, rational or physical. This opinion, I am forced to say, was my consultant's; but it leaves unexplained the patient's apparent health and the week of convalescence.

Readers of Da Costa's *Medical Diagnosis* will recall the cases there alluded to, of hemoptysis occurring without perceptible lung lesion. I do not think, in this case, the attacks of bleeding prior to the fever had much, if indeed any, connection with the fatal one. I believe that had the man lived, phthisis from hemorrhage would have existed—cases of phthisis being recorded as following typhoid fever—but that the first symptom, hemoptysis, was too severe for his enfeebled system to overcome, and so death resulted.

Although I believe hemorrhage from the lungs in typhoid fever is by no means unknown, it seems very strange that I failed to find, after a search quite thorough in its character, any recorded case of hemoptysis following typhoid fever. I trust the extreme rarity of the case will be a sufficient excuse for reporting it at this length.

REMARKS ON INFLUENZA.

BY J. CHESTON MORRIS, M. D.,
PHILADELPHIA.

I wish to place a fact on record at this meeting of the College, and a hypothesis as to the nature of the epidemic influenza which we have all been treating during the past eight months.

The fact is this: In December last I was called to see Mrs. W., living on Thirteenth street, below Lombard, and found her suffering from a severe attack of the "grippe." Her first remark to me was, "Doctor, I am attacked by the same cold you cured me of last August." On turning over my note-book I found that I had in August recorded her case as influenza.

Now, then, for my hypothesis as to the nature of this singular malady. We have had it recurring more or less irregularly, with greater or less severity since 1842. Each epidemic has been marked by symptoms of its own—in one year the force of the disease would seem to expend itself on the throat; in another, on the mucous membranes of the eyes and nose; in another, on the bronchial surface. In all, as in the epidemic of this year in a more specially marked manner, there has been one feature in common of this Protean disease—that of debility, prostration of strength and vital energy. The first uncomplicated fatal case in this city, I believe (that of Mrs. C., on Thirty-eighth street, above Market), was one of simple loss of power in heart and lungs. From what I have since seen, I believe that the death of Professor S. (Lombard street, below Fifteenth), whom I saw in consultation at the close of what his attending physician called a low nervous fever, preceded by repeated alarming attacks of heart-failure and pulmonary congestion,

was due to the same cause. This view, that there is a loss of power of the heart and lungs to perform their work is, I believe, shared by the great majority of observers. But this epidemic has been characterized by three other sets of symptoms: First. Violent neuralgic pains in various parts of the body. Second. Intense mental and nervous depression, out of all proportion to any physical signs to be detected; people "never felt so ill in their lives;" strong and active men became nervous and apprehensive in a manner and to a degree to alarm all who knew them. Third. Many suffered (and of this form of the disease I have seen a number of cases lately) from a loaded condition of the sigmoid flexure and rectum, with constant straining efforts at stool, ineffectual except in the discharge of a little glairy mucus, and with sharp, cutting, colicky pains due to gaseous distention of the colon.

These symptoms—the failure in heart and lungs, the abdominal sufferings and the neuralgic pains—all point to a neurotic cause, such as the paresis or partial paralysis of the pneumogastric nerve. And this I believe to be the true nature of our epidemic. I have fought it accordingly, since I recognized it as such, with stimulating doses of whiskey, opium and strychnine, watching for recurrences and relapses, and treating them as they took place.

If we were to look for a cause of this paresis, affecting so many persons at once, scattered over so large a portion of the northern hemisphere, traveling more rapidly than by human modes of transportation, or following other than ordinary lines of communication, where should we be so likely to find it as in a state of the atmosphere which rendered the process of breathing more difficult and exhausting than it ordinarily is? Some slight change of barometric pressure, or of humidity, would give ample occasion for fatigue of the pneumogastric and other nerves controlling respiration and circulation, the effect would be felt in each system in its weakest spot, and we would have thus an explanation of the very various symptoms and phenomena presented.

The above remarks were made by me at the meeting of the College of Physicians last June, and were subsequently embodied in a paper read before the Academy of Medicine at its recent session in this city. Practical experience of the benefits resulting from the administration of tincture of nux vomica, in doses of from ten to fifteen drops every three or four hours, in cases of depression of pulmonary and circulatory function, leads me to commend it to the consideration of the profession.

1514 Spruce Street.

PELVIC ABSCESS IN A MAN: SPONTANEOUS CURE OF HERNIA.[1]

BY DAVID S. BOOTH, JR., M. D.,

BELLEVILLE, ILL.

The following case of pelvic abscess came under my observation while surgeon in charge of the International and Great Northern Railway Hospital. While authority justifies Gross in saying, "the diagnosis of deep-seated abdominal abscesses is sometimes extremely obscure," I think this was unusually so, owing to the urinary symptoms occasioned by pressure upon the bladder and urethra; at any rate, not one of the half dozen physicians who had been connected with the case, was able to arrive at its true nature until a free incision had been made, and the cavity had been explored with a probe. The urinary symptoms were misleading; and I find upon referring to the case-record which is in my possession, that my diagnosis, made upon the patient's admission (as required by the hospital rules) was, "abscess of bladder (?)," which was revised by substituting "abscess of cavum Retzii," or the prævesical space.

About March 25, 1888, A. G. M., a locomotive fireman, 28 years old, applied at the hospital for what was diagnosticated by the assistant house surgeon who attended him as cystitis; but the patient, receiving no relief, fell into other hands; and it was not until April 24—a month later—that I admitted him to the hospital, and obtained the following history.

About five or six weeks before, he had noticed a hard lump in the hypogastric region and pain about the neck of the bladder during micturition. He noticed no alteration in the color or character of the urine, and had no fever. His bowels were in good condition—in short, he considered himself in good health, and continued at work for some ten days after he first noticed the swelling. He stated that the swelling had increased in extent of surface involved;

[1] Read before the Southern Illinois Medical Association, November 21, 1890.

that he had had fever lately; that his urine was high colored and his micturition more frequent, causing him to pass urine several times during the night; and that his stream had diminished in size. He had noticed no sediment in the urine. He had had gonorrhœa two years before, which gave him no unusual trouble. His bowels were costive but no pain accompanied the act of defecation. His tongue was coated centrally with white fur. He did not remember receiving any injury.

Examination of the hypogastric region revealed a hard, circular intumescence, some six inches in diameter, but not very prominent; tender upon light pressure. The man's pulse was 96; his temperature 101⅘° Fahr.

Examination of the urine resulted as follows: color, somewhat darker than normal; flocculent; faintly alkaline in reaction; sp. gr. 1.020; trace of albumin. The microscope revealed pus corpuscles and squamous epithelium.

In attempting to pass a catheter, with a view to ascertaining the condition of the urethra, as well as to learn whether or not there was retention of urine, I found the membranous portion of the urethra diminished in caliber to such an extent as to permit the passage of a filiform bougie only. The patient was given the fluid extract of pichi and quinine, and gradual dilatation was performed, until I could pass a No. 14 English bougie. As soon as urethra permitted, the bladder was washed out every day or so with Gerster's solution of salicylic and boric acids.

On May 7, twelve days after admission, the tumor was not so painful and it pitted on pressure. The urine was more natural in appearance, and the micturition less frequent. As suppuration was evident, moist heat was ordered to be applied.

On May 9, palpation gave an indistinct sense of deep fluctuation, and the tumor was aspirated, the needle being inserted about one and one-half inches to the left of linea alba and about three inches above the pubes. About seven ounces of a dark fluid, having the consistency of cream and a stercoraceous odor, was obtained.

On May 12 the aspirating needle was again inserted, but the fluid being too thick to flow through the needle, an incision about one and one-half inches long was made, to the left of the linea alba, when about ten ounces of fluid, having the same offensive odor as before, was discharged.

The patient improved rapidly, the urinary symptoms disappearing at once, and he was able to lie on either side—the dorsal decubitus alone was possible previously. He was discharged at his own request June 23, nearly two months after admission. When I saw him last, some eight months after his discharge from the hospital, he informed me that his health had been excellent and that he had been at work for some months. He further informed me that he had been *cured of a right oblique inguinal hernia.*

As my intention was to report the case without prolixity, I have failed to call special attention to the absence of those symptoms of abscesses in general which have the most diagnostic import: namely, rigors, perspiration and pain, from the latter of which he was quite free, except upon movement and during micturition. Furthermore, in arriving at the diagnosis, we were mindful of the fact that other abscesses occur in and about this location which were to be excluded, and especially were we conscious of the probability of perityphlitis with the cæcum and appendix vermiformis in the hypogastric region, an occasional anomalous position. Without attempting to confirm the diagnosis by exclusion, I will conclude with the following hypothesis in regard to the spontaneous cure of his inguinal hernia.

As the patient wore a truss and his occupation—locomotive fireman—required him to be a great deal of the time in the stooping posture, and to make strong exertions in this posture, inflammation of the fascia transversalis was set up; and, as this fascia forms the internal abdominal ring as well as the inner wall of the inguinal canal, obliteration of the canal had resulted, and a cure of his hernia.

PERISCOPE.

Resection of Prostate for Enlargement.

In the *Medical Press*, December 3, 1890, Mr. R. F. Tobin, Surgeon to St. Vincent's Hospital, says: Clinical and pathological experience have I think settled the following points:—(1) That there may be considerable enlargement of the prostate without any stoppage of urine. (2) That when there is permanent retention it is due in nearly all cases to a prominence which when pressed upon by the urine closes the internal orifice of the urethea. It follows that to do away

with the obstruction it is necessary to remove as much of the gland as is in the way and no more. This can, I think, best be done in the manner adopted by me for the relief of the patient whose case I here relate.

J. K., æt. 60, was admitted May 31, 1890, into the St. Vincent's Hospital, Dublin, for retention of urine due to an enlarged prostate. For eleven years he had suffered more or less from this ailment, and had been treated for it both by me and my colleagues. On the last of these occasions, about four years ago, I made a digital examination of his bladder through a perineal incision, but not being able to ascertain thereby anything more definite than what was already known, that there was an enlargement of the prostate, I used the incision merely to drain the bladder and cure thereby a cystitis that was then adding greatly to his sufferings. The history of the years that intervened between that operation and his admission on the present occasion is the ordinary one of a poor man who cannot make water without the use of an instrument. A rough catheter and a raw urethra sketch it sufficiently. When admitted he was emaciated and in a bad state of health, there was a tendency to the formation of bed sores on every prominence, the urine was fetid, he had hourly calls to micturate and could do so only through an instrument, the passage or retention of which gave intense pain.

The following operation was performed on May 9. A supra-pubic cystotomy having been done in the usual way, a digital exploration showed the middle and left lobes of the prostate to be much enlarged. The enlargement was a ridge, about an inch in height and an inch at its base, surrounding and overlapping two-thirds of the urethral orifice. Although the whole appeared to be one mass it was only so by contact, for the finger could be passed between the lobes. The instrument used to shave off this protuberance was an écraseur extemporized in this way. A wire doubled and bent to a suitable curve was passed through the urethra into the bladder. A silver catheter was then slipped up along it, but its point in place of being passed into the bladder was made to impinge against the urethral obstruction. Next the double wire lying in the bladder was opened out into a loop and slipped over the enlarged middle lobe and was kept embedded round its base by means of two fingers passed through the abdominal incision; while this wire was being made to cut its way through the part it encircled, the inserted fingers helped by the point of the catheter, which was depressed to the spot it was desired to reach, regulated its direction. I was surprised how little resistance there was to its progress. As the lateral lobe was not of a shape to be encircled by the wire it was necessary to divide it into two by nicking it deeply with a scissors. Each half was then dealt with as had been the middle lobe. The surface left was found to be smooth and to slope into the urethra. There was little or no bleeding. Copious irrigation with warm boric lotion and a partial bringing together of the edges of the wound (the low vitality of the patient gave no prospect of immediate union) completed the operation.

The chief points noted during the subsequent progress of the case were sloughing of the cellular tissue in the immediate neighborhood of the abdominal incision; extension of the bed sores noted as existing when admitted; uremic delirium for ten days with a large amount of albumin in urine (about one-sixth). These complications notwithstanding, the patient made a good recovery. Most of his urine passed away through an india-ruber tube to a vessel alongside his bed. What urine overflowed was absorbed by large peat-moss cushions placed under the patient. The house diaphoretic mixture containing liq. ammon. acet., pot. nit., and spirit æther nit., seemed to favorably influence the uremic condition.

On the twenty-second day after the operation the tube—a smaller one than originally inserted—was withdrawn from the abdominal wound now nearly healed, and a catheter was passed by the urethra and left in.

On June 16, the patient was allowed up, and a few days later, about seven weeks after the operation, on being asked how he was, he answered, "I can make water as when I was a boy of fifteen." This sentence must be taken rather as expressing his wonder at the change that had been effected in him than as an accurate statement of his condition. As a matter of fact, he could contain about half a pint of water, and passed it without pain or difficulty in the usual way. A week later he was discharged.

The parts removed are three masses, each about the size of a small walnut. Mr. Patteson, who has microscopically examined these, has found in them nothing but hypertrophied prostatic tissue.

The method of resecting the prostatic gland here set forth has I think the following advantages :—

1. As much of the gland as interferes with the escape of the urine is removed and no more.

2. The portion that blocks the urethra is removed in a satisfactory manner, for the wire cuts up to the point where the instrument has been stopped by the obstruction.

3. A smooth surface sloping into the urethra is left instead of the more or less rough one that must result from taking away the gland piecemeal with a forceps.

4. There is very little hemorrhage.

I do not know that in all cases a wire would cut its way through an enlargement as easily as it did in the instance now related, but this difficulty could be overcome by preparing a bed for it with the point of a knife or scissors. Only in the coverings of the gland need any resistance be expected, its friable substance is easy of division with any instrument.

Nov., 1890.—It is now six months since the performance of the operation. The outlet from the bladder continues quite free, and the power of retention improves with the lapse of time. The general condition of the patient is also much improved.

Products of Pathogenic Bacteria.

During the past two years great progress has been made in the study of the action of pathogenic bacteria. This work has chiefly been carried on by Koch and Pasteur on the Continent, and by Drs. Sidney Martin and Hankin in England. In the *Revue de Médecine*, 1890, No. 7, Dr. Charles Bouchard publishes an article on the properties of the substances secreted by pathogenic micro-organisms. It contains the chief part of his address before the Tenth International Congress on the "Mechanism of Infection and Immunity." After an exhaustive summary of all that is known concerning the action of products of metathesis with which we are acquainted, Bouchard relates a series of thirty-one experiments which he made, partly in order to investigate the power which blood-serum possesses of destroying bacteria, and partly to ascertain how far their products confer an immunity against similar or other bacteria. Many experiments demonstrated the influence of the same products on phagocytosis. The space here is too limited to enter into the details of this interesting paper, but the general results of Bouchard's investigations are as follows. Among the substances secreted by the microbes are some which have an inhibitory action on them—that is to say, these products tend to retard the development, increase and characteristic action of the micro-organisms; other substances are favorable to their growth. These, however, only act indirectly by modifying the material upon which they grow (peptones, etc). Such products may be favorable or unfavorable for other microbes. Some organisms produce poisonous substances upon which depends their virulency. Amongst pathogenic microbes are some which secrete substances that confer upon animals inoculated with them an immunity against these particular germs; this they do not by their presence only, but by modifying the animal organism, so that it forms a less favorable pabulum for the development and growth of the bacteria, and causes the leucocytes to perform the process of diapedesis more rapidly, and to assume their functions as phagocytes more energetically. If an animal be inoculated with these substances, together with a pure culture of the same bacilli from which they were obtained, the disease runs a more rapid course, whilst its development will be delayed or prevented if the animal be inoculated a few days before the injection is made. If bacteria which act antagonistically towards one another be cultivated together in a test-tube, the soluble products of the "stronger" can be made to retard the development of the "weaker" organism. So that if an animal be inoculated with the products of metathesis of the "stronger" at the same time as the active principle of the "weaker," the action of the latter will be delayed and weakened. Some microbes appear to assist the action of others; these Bouchard terms "auxiliary microbes." By this means an animal may be infected with a disease which it would otherwise resist.—*Lancet*, December 27, 1890.

Antipyrin in Puerperal Fever.

Dr. Wm. McBeath says in the *Lancet*, November 22, 1890 :

After parturition there is no condition more annoying and troublesome to the physician or disastrous to the patient than puerperal fever. Whether it occurs as the result of septicemia, from direct absorption

of putrid matter generated in the patient's own uterus, or from infection, the prognosis is always bad. The remedial measures generally used have been so often unsuccessful and are so unreliable, that any remedy or mode of treatment by which the great mortality from it can be materially lessened should be worthy of consideration and trial. Dr. McBeath has never noticed in any publication that antipyrin has been used with success in puerperal fever. In four cases in which during the past eighteen months he has prescribed it, it has acted almost as a specific. He gives details of the last case. The other three cases were almost the same, being characterized by the usual symptoms. They were treated in the same way, and all got better.

In the case he describes, a primipara, twenty-two years old, was attended by a midwife, and delivered of a male child on July 2, 1890. On July 7 the husband called in a medical man, who found her suffering with puerperal fever. He treated her in the usual way, with large doses of quinine, opium, hot linseed poultices and irrigation of the uterus with a solution of Condy's fluid. On July 10, as she was thought to be dying, Dr. McBeath was called in to see her in consultation, and found her pulse 140 ; temperature 103.5° ; abdomen swollen, tender, and of the peculiar peaked shape, which we never see except in puerperal peritonitis ; discharge scanty and fetid ; milk almost gone ; countenance anemic, and breath sweetish. She was also totally unable to move in bed. Dr. McBeath advised that the irrigation of the uterus and the hot poultices should be continued ; and in addition, that antipyrin should be given in ten-grain doses every hour for six hours. In five hours the temperature had fallen below 100°. During the next twenty-four hours the antipyrin was given in the same dose every three hours, and after that the woman took another half-dozen powders, one every four hours. Thus in two days and a quarter she had taken eighteen powders of ten grains each, the temperature being kept down the whole time. At the end of this period her other symptoms had very much improved, the pain and tenderness had nearly gone, the swollen condition of the abdomen had disappeared, the appetite had returned, and she could move freely in bed. On the fourth day after Dr. McBeath saw her she had a sharp attack of diarrhœa, which sent up the temperature to 106°, but a mixture of soda, bismuth and opium soon relieved her and stopped it. She afterwards made a good recovery, no further bad symptoms supervening.

The symptoms in the other three cases were almost identical, except that none had diarrhœa after taking the antipyrin. The treatment was the same, and so were the results. In all there was immediate lowering of the temperature, followed by gradual amelioration of all the bad symptoms.

It will be noted that irrigation of the uterus and the hot linseed poultices were continued during the administration of the antipyrin, and, indeed, for a day or two afterwards ; but it must be remembered that these had been used for several days before the drug was given, and that the patient was going from bad to worse. As auxiliaries no one would be justified in omitting them, but Dr. McBeath says he has never found irrigation of the uterus with an antiseptic solution and poulticing alone to cure puerperal fever. He feels satisfied that in antipyrin we have a remedy which, if given boldly and judiciously at the outset, will enable us to treat these cases with more hope of success. He has had such good results that he is anxious for others to try it. No doubt in certain cases a larger dose may be given at the beginning of the treatment ; but in the case detailed above ten grains answered every useful purpose. Dr. McBeath generally orders each powder to be dissolved in two teaspoonfuls of brandy, and then a little cold water to be added, so as to make a draught of about an ounce and a half. Antipyrin, he thinks, acts as an antiseptic as well as an antipyretic, and it may possibly be of use in other cases of septicæmia or blood poisoning besides those arising after childbirth.

Massage in Eye Diseases.

In the *Meditzinskdië Obozrenië*, Nos. 13 and 14, 1890, p. 59, Dr. W. K. Hirschberg draws attention to valuable services obtained by him from local massage in various ocular affections. In such cases where the eyeball should be subjected to the manipulations, he smears the surface of the eye with vaseline containing some yellow or white mercury (precipitate) or iodide of potassium, and, having placed a forefinger on the upper or lower eyelid, proceeds to quickly rub it against the eyeball in a radial or circular direction. In cases of massage limited to the eyelids alone, he makes friction either with a forefinger, or a tightly rolled cotton-wool

globule, commencing at the inner canthus and passing along a curved line down to the cheek (that is, correspondingly to the course of branches of the anterior facial vein, as suggested by Pfalz). In either case the sittings are repeated daily, lasting each time from 2 to 4 minutes. The treatment is especially recommended in, 1, *chronic forms of marginal blepharitis*, in milder or relatively recent cases of which all annoying symptoms (such as itching, sticking together of the eyelids, and so on) are said to disappear after four or five *séances*. As a rule, a complete cure ensues in from 10 to 15 days. The manipulations should always be preceded by a careful removal of dried crusts, which can be best effected by means of rubbing the margins with a piece of cotton-wool smeared with yellow mercurial salve. 2. *Phlyctenular conjunctivitis* where massage of the eyeball should be performed (after smearing the latter with a yellow mercurial or boric acid ointment). 3. *Follicular conjunctivitis*, in which Dr. Spaeth's plan should be preferred to all other methods; that is, the eyelid should be everted, the fornix conjunctivæ anointed with iodide of potassium salve, and the exposed fold itself subjected to rubbing with a forefinger's tip. Follicles disappear usually very quickly. 4. *Trachoma* of all stages, where a direct massage of exposed diseased areas may sometimes prove as successful as the treatment by cauterization (*e. g.*, with sulphate of copper), while being less disagreeable for the patient. 5. *Phlyctenular keratitis*. 6. *Corneal opacities*, remaining after keratitis, where the treatment is frequently followed by a marked improvement of vision, and that not only in recent cases, but sometimes even in inveterate ones. 7. *Pannus Trachomatosus* and *Scrophulosus*, in which massage of the eyeball (with white mercurial salve and atropia) often proves very beneficial. Of contra-indications, the author mentions the presence of inflammation or even simple irritation of the iris. In acute glaucoma he failed to obtain any amelioration, the manipulations carrying a vivid pain to the patient.

Unconscious Parturition in a Primipara.

A case of high obstetric and medico-legal interest is to be found in the *Archives de Tocologie* for November. Physiologically painless parturition is rare. Tarnier has related some cases, including one instance where a Canadian woman occasionally dropped a baby on the ground, at term, without noticing it. In Howard's case labor took two hours; the patient was reading a book till a quarter of an hour before the child was delivered, which event occurred after some straining, not sufficient to make her cry out. In Dr. Brunon's case, newly reported, a married woman, aged 22, had a troublesome cough one day shortly before term. The coughing was accompanied with lumbar pains, which increased. At 11 o'clock in the evening the patient tried to pass a motion. She sat over an hour in the closet, believing that her pains signified painful defecation. Then she went to bed. At half-past 1 o'clock she woke up feeling a desire to pass a motion, with lumbar pains such as she had felt before when constipated. As she rose to go to stool a smart lumbar pain occurred, and she felt something between her thighs. On handling it she found, much to her surprise, that it was the head of her first-born. She declared to Dr. Brunon that the pains were entirely lumbar, she had no colicky sensations, and none of the expulsive pains usually so severe, especially in primiparæ. The desire to defecate was strong, and she stated that the child might have been born into the pan of the closet without her recognizing the truth of her condition till the moment of its delivery. The patient was an intelligent, well-educated woman, free from any neurosis. This case proves that in the case of an inexperienced person an infant might be expelled into the water in the pan of a closet without any intention of infanticide on the part of the mother.—*British Medical Journal*, December 20, 1890.

Making Beef-tea.

The *Chemist and Druggist*, November 29, 1890, under the title, "Best Method of Making Beef Tea," makes the following statement:

Miss Mary Spanton, of the Hospital for Women and Children, gets a prize from the *Nursing Record* for the following directions: "Take 1 lb. of the leg of beef, to which, when minced, add 1 pint of cold water. Let stand for four hours; then put it into an earthenware vessel lightly covered over, and place it inside another vessel, or pan, filled with water, which, after coming to boiling-point, must be allowed to simmer

from four to six hours gently. This can be thickened if desired, and the doctor approves, with arrowroot, sago or rice, when the patient can take it, or varied by putting ½ lb. of mutton or veal to ½ lb. of beef, and flavored with celery."

[Any one who follows these directions will find that his beef-tea has no beef whatever in it. The "*this*" which "can be thickened," etc., is the *water* round the earthenware vessel. It is curious that this slip in the directions was not noticed by the *Nursing Record*, which gave the prize, or the *Chemist and Druggist* which recorded the award. Why any one should get a prize for re-hashing so ancient a method of making beef-tea, and the value of the method itself, it is not worth while to discuss.]

How to Apply Forceps.

In a paper in the *American Journal of Obstetrics*, December, 1890, Dr. Henry D. Fry, of Washington, describes what he thinks the best method of applying the obstetric forceps. He quotes a thesis on this subject written by Dr. Lepage, of Paris, who says the ideal method of extraction with forceps is to apply the instrument in such manner that during traction the fetal head is free to execute all the movements that would occur were the labor normal.

The proper application of the instrument, to attain this result, is:

1. To grasp the sides of the head with the blades;

2. To make traction in the axis of the pelvic canal; and

3. To secure mobility of the head during its passage.

This last indication is most important, but has been overlooked. The great advantage of the Tarnier forceps is due to the traction being independent of the grasp of the handle, the head is absolutely free to perform movements of flexion and extension.

With these facts established, Dr. Lepage proves that the above advantages are secured by applying the Tarnier forceps to the sides of the child's head when at or above the superior strait. He says it was during the year 1883 that Pinard first made his high applications after this method, and since the beginning of 1884 he has never employed them otherwise.

Dr. Fry sums up his opinion as to the application of the forceps as follows.

1. Anesthetize the patient and place her in proper position—buttocks well over the edge of the bed, and each limb supported by an assistant.

2. Ascertain the position of the head, introducing within the vagina two or three fingers, or, if necessary, the whole hand.

3. Apply the blades of a Hodge type of forceps to the sides of the head, with the concave edge directed towards the occiput.

If, for any reason, this cannot be accomplished, withdraw the instrument and substitute a Simpson, passing the blades to the sides of the pelvis. While making traction with this method, watch for anterior rotation of the occiput, and encourage it in some cases by reapplying the blades to better advantage.

4. Make every effort to secure aseptic conditions during the operation. The fingers, hands and forearms of the operator, the external genitalia and vagina of the patient, the instrument and the hands of the assistants, should be clean and aseptic.

On Oscillations in the Bodily Weight in Enteric Fever.

In the *Bolnitchnaia Gazeta Botkina*, Nos. 30 and 31, 1890, p. 747, Dr. Mikhail K. Zenetz, of Warsaw, publishes an important clinical contribution to changes in the bodily weight in typhoid fever, based on 384 carefully-studied typical cases. In each case the patient was weighed daily, between 9 and 10 A. M., all other clinical details possible being also registered from day to day, from his admission to his discharge or death. The following are the principal corollaries deduced by the author from his elaborate researches. 1. During the whole febrile stage of enteric fever the patient's weight steadily sinks, the average daily fall amounting to 0.6 per cent. (of the body's weight). During the first week of the disease the loss averages 0.8 per cent. a day; during the second, 0.7; during the third, 0.6; during the fourth, 0.5. In other words, as the disease advances, the relative loss in the weight decreases. 2. In uncomplicated cases, immediately after the onset of apyrexia, the weight begins to rise, the average daily increase amounting to 0.7 per cent. The largest relative gain occurs during the first week of convalescence, the rate gradually decreasing with each week. 3. In fatal cases the daily loss in the weight is usually very considerable, amounting fre-

quently to 3 per cent. 4. In such cases where a high fever is accompanied by sweats and diarrhœa, the weight sinks at an increased rate (up to 2 per cent. or even more a day). 5. Profound typhoid state (delirium, etc.) similarly increases the rate (up to 1 or 1.5 per cent. in a day). 6. The same holds true in regard to such complications as pleurisy, catarrhal or croupous pneumonia, parotiditis, otitis, etc. 7. An increase in the weight about the end of febrile stage (during lysis) points to a speedy advent of convalescence. 8. The retardation or arrest of increase in the weight after the onset of defervescence points to a nearing relapse or complication of this or that kind. 9. The daily losses in the weight above 1 per cent. justify a grave prognosis. 10. When such high losses coincide with a continuous and considerable acceleration of the pulse, the prognosis becomes almost absolutely hopeless. About the same conclusions have been reached by the author in regard to typhus fever. (See his *St. Petersburg Inaugural Dissertation*, 1887, with 103 cases.)

Hydrophobia in Egypt.

The Egypt correspondent of the *Lancet*, November 22, 1890, gives the following statements in regard to what he calls "hydrophobia in Cairo."

"Seven years ago," he says, "the streets of Cairo used to contain thousands of homeless dogs, and it was loosely believed that rabies was unknown among them. But the town has now been freed of pariahs, because they are no longer required as scavengers, and yet hydrophobia occasionally appears. The only two cases which have been known at the hospital during the last seven years have occurred during the past twelve months. A child arrived with cheek and lip disfigured by a bite from a dog four weeks before admission, there being no history of the dog being rabid. The wounds healed, but before the child left the hospital a hare-lip operation was done to prevent disfigurement. Two days after this operation the child developed hydrophobia, and died in three days' time. In the absence of inoculation experiments on rabbits, I suppose skeptics would affirm that this might be a case of tetanus, in spite of the presence of the clinical symptoms of hydrophobia. I may mention here that many cases are reported in Egypt of rabies and hydrophobia, which prove on investigation to be bites from healthy dogs, and some bitten individuals have been sent at public expense to the Pasteur Institute at Paris for prophylactic treatment.

"An interesting case, apparently of true hydrophobia, has just occurred at Kasrel-Aini Hospital. A young man-servant was sent up by his master with symptoms of exhaustion, great mental excitement, uncontrollable terror of draughts of air, sleeplessness and thirst. He made pitiable attempts to drink, and clutched the glass of water a few inches from his lips. He eventually allowed about half an ounce to be tilted between his lips, when he held the fluid several minutes in his mouth, seemed to swallow it, but then had a convulsion of throat and whole body, and hawked it up again with viscid saliva. He was treated with morphia injections and nutrient enemata, but twenty-four hours after admission he was dangerously maniacal, and had to be tied down in bed, and he eventually died six days and a half after he was first noticed to be ill. His previous history was that of an irritable, excitable person, but free from alcohol, hasheesh, or religious excitement. He denied that he had ever been bitten or scratched by any animal, and he had no traces of a bite on his body. His master's account is that eighteen months previously the boy had rescued a stray cat from a boar-hound who was playfully holding it on the ground. The cat was very frightened, and bit and scratched the boy through his clothes on the right thigh, but it is said that no mark was seen on the skin. If this was the cause of the disease, the long incubation is deserving of note, and it is the first time on record of a rabid cat in Egypt. The boar-hound was certainly not rabid, but there was no information about the future life of the cat. At the necropsy, twenty-one hours after death, the hands were blue and half clenched, the legs, but not the arms, were very stiff; the brain membranes were much congested, the cervical and dorsal membranes of the spinal cord were considerably congested, and the blood in the skull and body was dark and liquid, as in typhus. There was, as during life, redness of fauces and pharynx with great congestion of lungs, liver and kidneys; the heart was very firmly contracted, with no blood on the left side and a little black clot on the right.

"One of the arguments in favor of hydrophobia existing occasionally in Egypt is that the natives have a remedy for it dating from the old Arab physicians. It is a beetle of

the cantharides family, which causes the patient to urinate and evacuate blood, and it is believed that in the urine may be seen tiny effigies of a dog as large as a barley-corn."

Flexible Wire Stems for Stenosis of the Cervix.

In the *Medical Press*, November 26, 1890, Mr. Alexander Duke says of the value of the flexible spiral wire stem in the treatment of stenosis, that it is now some years since he published a description of this stem, now well known to gynecologists. Its principal use is to preserve the potency of the cervical canal after the operation of division of the os and cervix, commonly required as a cure for stenosis, giving rise to destructive dysmenorrhœa and sterility. He says that if one of the stems be introduced directly after this operation, it will not only prevent any union of the cut surface, but also, the subsequent contraction of the canal so commonly observed, and any tendency to excessive hemorrhage, by exercising a certain amount of pressure on the incised part.

These stems being self-retaining and requiring no vaginal support whatever, in addition or tampons of any kind can be worn by the patient when up and about, being flexible and short, cause no irritation; open at point and hollow, permitting free drainage, and easily kept clean while *in situ*, by syringing vagina daily during healing process, the water finding its way in and out of stem. His practice is to allow the instrument to remain till one "period" at least is over, subsequent to its introduction, or in other words, he allows the patient to menstruate through the stem, and he finds if this is done, there is no subsequent contraction of the canal observable years after the operation.

In cases thus treated, Mr. Duke has never had any complaint of a return of the symptoms existing before operation, nor has he had the slightest trouble, such as metritis, parametritis, cellulitis or septicemia.

The stems are easily introduced, the "duckbill" being the best speculum to facilitate this, and when once *in situ* they need not be interfered with until removal is considered desirable.

When Mr. Duke decides on using a stem that has been employed before, he takes the precaution to let it lie in boiling solution of creolin for a few minutes, and then fills the stem with either boric acid or iodoform, which does not add any difficulty to its introduction, the "introducer" penetrating the powder in the stem.

Mr. Duke has also found these stems useful as a drain in cases of chronic endometritis, and as a mechanical agent in plethoric amenorrhœa, or in those cases where the usual routine treatment to stimulate uterine action has failed.

The Teeth in Epilepsy.

Speaking of the importance of examination of the teeth in epilepsy, the *Lancet*, December 27, 1890, says that Dr. Bakowski mentions in the *Przeglad Lekarski* an instructive case of epilepsy occurring in a young Jewess. It had been going on for nine months, and latterly the fits had become more frequent, there being several every day. Bromide of potassium, quinine, arsenic and asafœtida had been given without any effect. Finally, although there was no complaint of toothache, it was decided to examine the mouth. Two teeth were found to be carious—the first upper molar on the right and the first lower molar on the left side. These were extracted, with the result that the fits entirely ceased and did not return, though the patient was under observation for six months subsequently. Upon being closely questioned the girl remembered that before the fits commenced she had had some unpleasant sensations in the affected teeth, but nothing that could be described as pain.

Southern California as a Health Resort.

Charles Dudley Warner says, in an article in *Harper's Monthly*, January, 1891, that there are many people in the United States who could prolong life by moving to Southern California. There are many who would find life easier there by reason of the climate, and because out-door labor is more agreeable there the year through; many who have to fight the weather and a niggardly soil for existence could there have pretty little homes with less expense of money and labor. It is well that people for whom this is true should know it. It need not influence those who are already well placed to try the fortune of a distant country and new associations.

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MEDICAL EXAMINERS AND MEDICAL EDUCATION.

A bill (published at Page 141, of this number of the MEDICAL AND SURGICAL REPORTER), which is intended to regulate medical education in Pennsylvania, has been introduced in the Legislature at Harrisburg by Mr. Brookes, of Philadelphia. This bill provides for the appointment of a Board composed of three eclectics, three homœopaths, and three persons spoken of in the bill as "allopaths." The bill makes it illegal for any medical school in this State to give degrees to students who have not gone through what is spoken of as four years' study, which shall include three courses of lectures, or to admit as students persons who have failed to meet certain requirements of preliminary examination to be prescribed by the Board. To this is added that the Board shall act as a sort of Police Board to report the failure on the part of any medical school to obey the provisions of the law, such failure being punishable by a heavy fine.

There are several unfortunate things about this bill. In the first place, what it aims at in regard to medical education might—if constitutional—be secured quite as well by a simple enactment, without the intervention of any Board at all; in the second place—considering that in Pennsylvania about four-fifths of the physicians belong to the regular portion of the profession, and that one-fifth are divided between the Eclectics and the Homœopaths, and that there are in this State five medical colleges conducted by the regular profession, while there is only one Homœopathic school and not one Eclectic school—it is obviously unequal that a Board which would be practically a Board of censors upon the medical schools, should contain six representatives of the one medical school as against three representatives of the five schools. More than that, we believe that the selection of a Board of this kind is absolutely impracticable. The members of the regular profession are not allopaths; and no one who knows anything about the use of correct terms thinks they are; and it is improbable that three men of any standing in the profession could be induced to become a part of a Board containing six members who willingly bear an exclusive title, or to accept the imposition of an exclusive title upon themselves—facts and principles would both prevent this.

There seems to be little hope that those who, in this matter, claim to represent the body of so-called homœopathic physicians, will abate a particle of their seeming distrust of those who desire that Pennsylvania shall be put on an equal footing with the best and most intelligent States in the country, by providing for a Board of Medical Examiners, who shall represent directly the State and the community, and shall simply determine the fitness of persons to whom are to be entrusted the lives and the health

of the citizens of this State. Some of us who desire this, deprecate most deeply that what we believe to be a desirable result should be imperilled by sectarian differences. We want the State of Pennsylvania to be placed on the very highest level in this matter. We naturally believe that that part of the profession to which we belong is the one which is most in accord with reason, but we have sufficient confidence in the intelligence of the Governor and of our fellow-citizens to be willing to have a bill passed which shall say nothing whatsoever about the character of the persons to be appointed on the examining board, or direct how they shall be chosen. This we say with full knowledge that the present Governor is supposed to have long been under the care of homœopathic physicians, and to be in some sense an adherent of that school; for he is quite as well known to be a man of integrity and courage.

The cause for which we strive we believe to be so just an one, and so sure of ultimate success, that we are quite willing to entrust the details of its accomplishment to an honorable man and have no doubt that the issue would be such as to be approved by all honorable men.

The REPORTER is opposed to the bill referred to above, for the reason that it is, we believe, in the first place, needless; in the second place, impracticable; in the third place, unfair in its provisions, and perhaps unconstitutional. We support heartily the bill published in the REPORTER, January 10, 1891, because we believe it is in the interest of our fellow-citizens, and that it is thoroughly practicable. As we have already said there are certain details of the bill which are not precisely what we would have wished; but its passage would do much, we believe, to promote the interest of medical science and the good of the community.

LEGAL RESTRAINT OF INEBRIATES.

The REPORTER has at different times given considerable space to the claims and arguments of those who are convinced that the tendency to excessive indulgence in alcoholic stimulants is to be regarded and treated as a disease condition, and this partly for fairness' sake and partly because it holds the opinion that in many cases the tendency is one which can best be combatted if regarded from a physical and not from an exclusively moral standpoint. But it is sometimes far easier to suggest a general principle in keeping with which to arrange a plan of treatment than it is to specify the details of such a plan. The truth of this fact appears when we reflect upon a discussion which took place before the Medical Jurisprudence Society of Philadelphia, January 13. Dr. Dercum, who opened the discussion, spoke of the change of general and professional opinion in regard to the treatment of inebriates and claimed that the inebriate should be treated as a sick man, and his condition should be considered the same as in a case of insanity. The State of Pennsylvania, he said, places no control over the inebriate until he is practically beyond recovery, and what is needed is a system of special asylums maintained by the State, in a manner similar to insane hospitals, with special laws and regulations. Legislation should deal with inebriates in general, no matter what the narcotic used may be, whether alcohol, opium or chloral. He thought, also, that druggists should be held to a strict account, as he had known where a prescription once given had been renewed for years.

John A. Clark, Esq., presented some of the difficulties from a legal standpoint of carrying out the plan which seemed to be approved by physicians. He doubted whether an inebriate, on the certificate of two physicians, could be sent to an insane asylum. In the State of Wisconsin, he said, it was tried to control such persons by law, but the Supreme Court decided against the constitutionality of such proceedings.

Dr. E. N. Brush, of the Pennsylvania Hospital for the Insane, who has had all

kinds of inebriates to care for, would classify them as those who were drunkards by reason of certain disturbed, unbalanced nervous conditions; those who were drunkards through viciousness, and those who were the victims of disease. The trouble in dealing with them, he thinks, is the same as in cases of insanity, where persons are allowed to go on without treatment because they are not sufficiently insane to warrant a certificate being given. In New York, he said, a man cannot be legally held unless he is dangerous to himself or those around him, and, like Dr. Dercum, he thought that men, unfortunately, were allowed to go on until beyond the hope of recovery.

Thus the discussion ended without the proposition of any plan which appeared feasible to both lawyers and physicians. This does not signify that the endeavor after a feasible plan should be abandoned; for, if the State should extend a supervising and controlling care over individuals for their own good or for the general welfare, it is desirable that all who are interested in public questions should continue to inquire what may properly be done to restrict the evil consequences of the drink habit. The question discussed by the Philadelphia Medical Jurisprudence Society at its last meeting is—as one of our lay contemporaries calls it—a "knotty one;" but time and patience may get through or get round these knots.

BARKING COUGH OF PUBERTY.

It is a well-recognized fact that cough does not necessarily imply an affection of the lungs or bronchial tubes. Coughing is a reflex act, in which the lungs are filled with air by a deep inspiration; the glottis is then completely closed, but it opens suddenly under the pressure of a forcible expiration, by which a column of air is driven through the upper respiratory passages. The apparent impulse to cough is usually transmitted by the superior laryngeal nerve, but any one of the other nine branches of the pneumogastric may carry it. Almost every one, for example, has seen instances of cough excited by examining the ear, or by foreign bodies in the auditory canal. Another variety of cough, however, which is entitled to be considered distinct, is described by Sir Andrew Clark, in the *Lancet* for December 20, 1890. The paroxysms which characterize the cough in question are well illustrated in the first case reported by Dr. Clark. They consisted of a close succession of loud, dry, clanging, convulsive coughs, varying in intensity and duration, broken into irregular bars and phrases, resembling at one time the barking and at another the howling of a dog. During the continuance of the paroxysm the patient appeared to be much distressed; his face was swollen and faintly livid; the eyeballs became prominent and congested; the body, bent forward, was shaken by the violence of the coughing, and the hands, which were crossed upon the chest, convulsively clutched his clothes. At the close of the paroxysm the patient appeared to be a little dazed and was somewhat giddy. He recovered in a few minutes, passed a quantity of limpid urine, and the storm was at an end.

The attacks are not always as severe as in the case just referred to; they vary greatly in severity. The age at which patients are affected is that of puberty, generally from the thirteenth to the sixteenth year. More girls are affected than boys. The general health suffers but little, and there are no physical signs on the side of the lungs. The patients are generally, though not always, of nervous habit and heredity, and most of those seen by Dr. Clark were over-fed; in addition to ordinary meals there were frequent "interludes" of different kinds of food, preserved for the most part, and alcoholic beverages of some sort were freely administered. The course of the affection, according to Dr. Clark, though usually tedious and sometimes prolonged, has ended eventually in complete recovery.

As to the pathology of this convulsive

cough of puberty, Dr. Clark seems to think that the seat of the disease is in the spinal ganglia which have recently been shown to exercise a marked control over respiratory movements. The condition of unstable equilibrium and hyper-excitability which characterize the organism at the period of sex evolution account for the development of the cough at this time, especially when one bears in mind that the larynx is one of the principal seats of the changes which take place at puberty. The neurotic tendencies of the patients, and the absence of any local changes adequate to the explanation of the malady, warrant the belief that it is of nervous origin.

Regarding the treatment of the affection, Dr. Clark says that improvement has almost invariably followed the enforcement of a simple but liberal dietary, arranged in three, or at most four, meals a day; abstinence from alcohol; cold or tepid sponging; warm but not too warm clothing; active out-door exercise, early hours and general discipline. Of local applications, only two have done good service. The first is glycerine of borax with oxychlorate of bismuth and morphia, and the second is the same combination with the substitution of cocaine (ten per cent.) for morphia. These applications should be brushed over the whole interior of the throat after each meal, and also at bed-time. In using cocaine, care must be taken in its application to the larynx, which is sometimes provoked by it into dangerous spasm. Only two internal remedies have been found of service, one is syrup of bromide of quinine and iron, with small doses of arsenic; and the other is a pill of reduced iron, valerianate of zinc, belladonna and nux vomica. These pills must be given in slowly increased dose until the physiological effects of the belladonna become apparent; and then, slightly diminished, the amount of belladonna administered should be maintained at that level for some time. Dr. Clark does not approve of the long sea voyage in the treatment of this affection.

Dr. Clark has the happy faculty of putting an old truth in a fresh light, and by a well chosen name giving definiteness and precision to what many have seen before, but have not closely studied. The affection he describes is not new, and he does not claim that it is; but he is none the less entitled to great credit for his admirably clear description of it, and for the valuable suggestions as to its treatment.

Book Reviews.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the Reporter.]

A MANUAL OF MODERN SURGERY. An Exposition of the Accepted Doctrines and Approved Operative Procedures of the Present Time. For the Use of Students and Practitioners. By John B. Roberts, A. M., M. D., Professor of Surgery in the Woman's Medical College of Pennsylvania, etc. With five hundred and one illustrations. 8vo, pp. xvi, 800. Philadelphia: Lea Brothers & Co., 1890.

Dr. Roberts has set himself the task of writing a condensed treatise on modern surgery. He has aimed to have the work practical, and to this end has avoided the discussion of theories, historical questions and traditional views and operations.

The book is divided into two parts. Part I includes general surgical pathology, or principles of surgery. Under this heading the author discusses inflammation, erysipelas and septic processes, scrofula and tuberculosis, syphilis, rickets, tumors, wounds and shock, mode of repair and treatment of wounds, practical surgery and anæsthesia, operative surgery, and plastic or reparative surgery. Turning to anæsthesia, as a subject which has excited world-wide interest, especially during the past year, we notice that the author appears to have been very little influenced by the testimony indicating that chloroform is not as dangerous as it is generally believed to be in the northern and western part of the United States. Dr. Roberts declares that chloroform is much more dangerous than ether, and that "this is a sufficient cause for the abolition of its (chloform's) use." The advantages claimed for chloroform over ether are attributed to improper methods of giving the latter. The author's method is to give the patient a hypodermic injection of morphine and atropine about fifteen minutes before inhalation is begun, and then to give the ether in concentrated form from a napkin covered by a towel. "When inhalation is once fairly begun the ether cloth should never be removed from the face unless spasm of respiration or actual vomiting necessitates its temporary withdrawal." Quite apart from the choice of ether or chloroform as an anæsthetic, what might be termed the "suffocative" method of administering ether seems to be more saving of the time and patience of the surgeon than of the comfort of the patient.

Part II is devoted to Special Surgical Pathology or Practice of Surgery. The author's descriptions of resection of the intestine and of intestinal anastomasis

are especially good, and the illustrations well-chosen and very helpful to an understanding of the operations. The definition of amputation is a strange blunder: "By amputation is meant the removal of a locomotor extremity of the body;" the upper extremity, however, is included, and description of its operative removal given.

The author is to be congratulated upon keeping so closely to his purpose to make the book modern in its teaching and practical in its bearing. While the teaching on some points might be criticised as too dogmatic, it is in the main sound, and it is presented with admirable clearness and brevity. The illustrations seem to have been selected strictly with a view to their utility, and are certainly well-chosen. The text is remarkably free from typographical errors for a first edition. Both author and publisher have every reason to feel proud of its handsome appearance. We can cordially recommend it to our readers as one of the best books for students which has appeared in the English language.

ESSENTIALS OF THE DISEASES OF CHILDREN. Arranged in the form of questions and answers, prepared especially for students of medicine. By WILLIAM M. POWELL, M. D., Physician to the Clinic for Diseases of Children in the Hospital of the University of Pennsylvania, etc. Small 8vo, pp. 214. Philadelphia: W. B. Saunders, 1890. Price, $1.00.

Dr. Powell has succeeded in compiling, from a number of the standard works on diseases of children, a very creditable compend, which forms No. 15, in Saunder's series. Most attention is given to symptomatology and treatment. In both the author follows Goodhart and Starr very closely. The descriptions are clear, and for the most part accurate and trustworthy as well. In speaking of the treatment of *tinea tonsurans*, Dr. Powell gives Dr. Harrison's treatment incorrectly, the principal ingredient in the formula, bichloride of mercury, being omitted altogether. Dr. Harrison recommended two solutions, the first consisting of liquor potassæ and iodide of potash, and the second of sweet spirit of nitre and bichloride of mercury. After the first had been well rubbed into the scalp, the second was to be applied. The object sought to be obtained was the production of biniodide of mercury, from the reaction between the bichloride of mercury and the iodide of potash, and the bringing of this biniodide into contact with the fungus. But there is some doubt whether or not the biniodide results from the reaction. It may be of interest to mention here that Dr. Harrison thinks he has found an ointment, composed of carbolic acid (gr. xxiv), caustic potash (gr. ix), and lanolin and oil of theobroma (of each ℥ ss), much better than the two solutions originally recommended.

The book fulfills a useful purpose, and may well find a place among others of this excellent series of compends.

LITERARY NOTES.

—The *Medicinische Neuigkeiten* commences its forty-first year in 1891. It will hereafter be published by Jos. Ant. Finsterlin in Munich. Prof. Martin continues to be its editor. Under his long connection with this journal it has acquired a deserved popularity, especially among practical physicians in Germany.

CORRESPONDENCE.

Wound of Rectum.

TO THE EDITOR.

Sir: Thinking it might be of interest to some readers of the MEDICAL AND SURGICAL REPORTER, I write concerning a wound sustained by Mr. A., living some distance in the country. While feeding his stock after dark, he accidentally got astraddle of the horn of an ox, and the animal in raising its head caught the man on the point of its horn with such force as to penetrate the left ischio-rectal region two inches to the left of the anal orifice, the horn going through the left wall of the rectum, three inches above, abrading the opposite internal rectal wall.

I arrived at night and was in doubt as to the best procedure at the time; so I used temporary means and dressings until next day, injecting per rectum an antiseptic fluid, which found external exit through the ischio-rectal wound. I saw also that the bowels were well emptied, thereafter keeping them closed by opiates for the period of six days. Not having in my books anything treating especially of such wounds, I next day chloroformed the patient and sewed up the rectal wound internally with catgut, using a rectal speculum and a slightly-bent perineum needle, with handle. I applied a firm pad over the external seat of the wound, and instructed the patient to keep on the right side, especially when defecating. As I had had the sphincter ani to contend with, I was in doubt as to the success of my treatment. I noticed but little defecation of a liquid character from the wound after the first week. In one month's time the patient came to my office comparatively well.

Yours truly,

W. H. LEWIS, M. D.

Birnamwood, Wis.

NOTES AND COMMENTS.

State Board of Medical Education.

An Act to Establish a State Board of Medical Education, to Define the Powers and Duties of such Board, and to make an Appropriation therefor.

SECTION 1. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met and it is hereby enacted by the authority of the same: That within three

months after the passage of this Act, the Governor shall appoint by and with the advice and consent of the Senate, a State Board of Medical Education consisting of nine members, physicians in good standing, citizens of this Commonwealth, three of whom shall serve for two years, three for four years and three for six years, and thereafter, biennially, there shall be appointed in the same manner three members of the said Board, one from each school of practice, as provided in this Section, to serve for six years in the place of those whose term shall have expired. They shall be graduates of some legally chartered medical college, or university having the power to confer medical degrees, who shall have practiced medicine or surgery for a period of not less than five years. Provided: That in the appointment of said Board the members shall be chosen equally from lists of names each list containing the names of ten registered physicians submitted by the State Medical Societies of the Commonwealth of Pennsylvania, to the intent that the three systems of medicine, *i. e.*, homœopathic, allopathic and eclectic be equally represented thereon, and provided further: That no two members shall be residents of the same county. In default of the submission of such lists, the appointments shall be made by the Governor at his discretion from among the registered physicians of the Commonwealth having the qualifications specified in this section.

Every appointment to fill a vacancy, or vacancies, in the said Board, shall be for the unexpired term, and the said vacancy, or vacancies, shall be filled by the Governor within sixty days after notification of the same, in accordance with the provisions hereinbefore stated; and he shall have power to remove any member of said Board for criminal, scandalous or dishonorable conduct.

SECT. 2. The said Board shall be known by the name and style of THE STATE BOARD OF MEDICAL EDUCATION OF THE COMMONWEALTH OF PENNSYLVANIA, and shall have a common seal, and may make and adopt all necessary rules and regulations and by-laws, not inconsistent with the Constitution and laws of this Commonwealth, or of the United States, and shall have power to locate and maintain an office for the transaction of its business.

Five members of said Board shall constitute a quorum.

SECT. 3. The Board shall meet at least twice each year, at such times and places as they may determine upon after the first meeting, which shall be held within sixty days after their appointment at such time and place as the Governor may direct, at which time, and annually thereafter, they shall organize by the election from their own number, of a President and a Secretary who shall also act as Treasurer. Provided: That the President and Secretary are not of the same school of medicine.

SECT. 4. No member of the Board except the Secretary shall, as such, receive any salary; but the actual traveling and other expenses of any member, while engaged in the actual duties of the Board, shall be allowed and paid on presentation to, and approval by, the Auditor-General, of an itemized account with vouchers annexed.

SECT. 5. It shall be the duty of said Board of Medical Education, to make all regulations as to the extent and character of the preliminary education, which shall be required of all students of medicine, and notify the dean of each medical college of the same. Any change in the standard required, must be announced by the Board at least one year prior to going into effect.

SECT. 6. The Board of Medical Education shall fix the minimum curriculum, and length of course of studies requisite to graduation. Provided: That the course shall not be less than four years, which shall include three annual terms of lectures. The Board shall delegate one or more of their number, who from time to time shall make an inspection of the methods of instruction employed, and the facilities for teaching, in each such medical college, and annually report the same to the Board.

SECT. 7. It shall be the duty of the Board to issue, under seal, to each graduate of such medical colleges as upon evidence of the dean and the secretary, or registrar of the same, shall have conformed to the requirements of the Board as herein before provided, a certificate duly setting forth such facts. Such certificate shall entitle said graduate, to register in any county of the State, in accordance with the act entitled, "An Act to provide for the registration of all practitioners of medicine and surgery" approved June 8, Anno Domini 1881.

The fee for such certificate shall not exceed two dollars.

A similiar certificate may be granted to graduates of medical colleges of other States,

who may desire to practice medicine or surgery in this State, provided that such colleges stand approved by the Board of Medical Education of this Commonwealth as maintaining a standard in every respect, preliminary and final, equal to that required of the medical colleges within this Commonwealth.

The fee for such certificate shall not exceed five dollars.

Graduates of colleges having a lower standard than that required by the Board of Medical Education of this Commonwealth, may receive the certificate of the Board upon a satisfactory examination before said Board. Such examination shall be in writing, and shall apply to the preliminary education, as well as the medical knowledge of the applicant. Provided: That all questions pertaining to materia medica, and therapeutics, shall be propounded and acted upon, by members of the Board of the same school of medicine with the applicant.

The fee for each such examination shall be twenty dollars.

All examination papers shall be kept upon file, and open to inspection, for a period of two years in the office of the Board.

SECT. 8. If upon investigation the Board of Medical Education discovers, that after the passage of this act, any medical college within this Commonwealth, has granted the degree of doctor of medicine to any person, or persons, deficient in respect to either the aforementioned preliminary or final educational requirements, or that any medical college within this Commonwealth, has conferred the degree of doctor of medicine upon any person, or persons, without having passed a final examination, it shall be the duty of the Board to notify the dean of said college of such fact, and proceed against such college for such infringement of the law. The penalty for a first offense, shall be a fine of not less than two hundred nor more than one thousand dollars. For a second offense, a fine of one thousand dollars shall be imposed, and the certificate of the Board of Medical Education shall be withheld from future graduates of said college, except upon examination before said Board, as provided in Section 7 of this act. In case of conviction for a third offense, the charter of such college shall be annulled.

SECT. 9. The Board of Medical Education is hereby authorized and empowered, to bring suit for the collection of such fines and imposition of such penalties, in the courts of the county wherein such college may be located.

All fees and fines collected by said Board shall be paid to the State Treasurer.

SECT. 10. After the first day of June, 1892, no physician shall be permitted to register in any county of this Commonwealth except upon presentation of a certificate as provided for in Section 7 of this Act, whereupon he or she shall be entitled, upon the payment of one dollar, to be duly registered in the office of the Prothonotary of the Court of Common Pleas in the said county; and any persons violating the provisions of this Act shall be guilty of a misdemeanor, and, upon conviction thereof in the Court of Quarter Sessions of the county where the offense shall have been committed, shall pay a fine of not less than fifty, nor more than five hundred dollars for each offense.

SECT. 11. Nothing in this Act shall apply to commissioned medical officers of the United States army or navy or of the United States marine hospital service, nor to any member of the house or resident staff of any legally chartered medical college or university or hospital during his or her term of service therein, nor to physicians of other States meeting duly registered physicians of this State in consultation, nor to those practicing denistry exclusively, nor in any manner whatever prevent or interfere with the dispensing and sale of medicines or medical appliances by apothecaries or pharmacists, and nothing in this Act shall be construed to prohibit the practice of medicine and surgery within this Commonwealth by any practitioner who shall have been duly registered before the first day of February, 1892, according to the terms of the Act entitled "An Act to provide for the Registration of all Practitioners in Medicine and Surgery" approved the 8th day of June, Anno Domini 1881.

SECT. 12. The Board shall make to the Governor, on or before the first day of December of each year, a full report of the work of the Board for the year.

SECT. 13. For the purpose of this Act, the words "practice of medicine or surgery" shall mean to treat, or attend, any person for money, gift or reward.

SECT. 14. The sum of two thousand dollars is hereby appropriated, to meet the necessary and legitimate expenses of the said Board.

SECT. 15. Section 4 of an Act entitled

"An Act to provide for the Registration of all practitioners of Medicine and Surgery" approved the eighth day of June, Anno Domini 1881, is hereby repealed.

Endorsing Medical Examiners' Bill.

At an informal meeting of a number of well-known physicians, held in Philadelphia this week the bill to establish a State Board of Medical Examiners and Licensers, prepared by the Committee on Legislation of the State Medical Society and presented to the House of Representatives last week by Representative Riter, was carefully considered. It was concluded that the bill is in the interest of public welfare and a resolution was adopted that "the medical profession should give its heartiest support to the bill."

Those present at the meeting were: Drs. S. Weir Mitchell, J. M. DaCosta, William Pepper, William W. Keen, William H. Waugh, J. W. Holland, James Tyson, Clara Marshall, James W. Walk, Charles W. Dulles, Hobart A. Hare, Edward Jackson, Edward H. Montgomery, William H. Parish, Horatio C. Wood, Lawrence F. Flick and John B. Roberts.

Philadelphia Polyclinic.

At the annual meeting of the Philadelphia Polyclinic and College for Graduates in Medicine, held at its building, Lombard, above Eighteenth street, January 12, 1891, the Trustees reported that the past year had been one of great activity in the institution and continued. The occupancy of the new building on December 29, 1890, was made possible by the generous contributions that have been received during the past two and one-half years. The furniture required for eleven rooms, the entire outfit of the apothecary shop, the electrical apparatus for the Nervous Department, and the outfits for the Orthopedic and Photographic Departments, are the most important of these contributions.

During the year just closed four free beds have been endowed upon the progressive endowment plan, and an agreement has been entered into with the Nurses' Beneficial Association whereby any member taken sick in the pursuit of her calling is cared for, free of cost, in a room perpetually endowed by the association.

There were, during the past year, a greater number of pupils than ever in the college department, and more patients in the hospital. The new building will provide accommodations in its four wards for about forty-three patients and private rooms for eight to twelve patients.

The Board of Public Charities has recommended the Legislature of the State to make an appropriation of $40,000, which is a recognition by that discerning body of the importance and needs of the institution.

Three new chairs have been created in the departments of surgery, diseases of the eye and diseases of the throat and nose, to be occupied respectively by Dr. John B. Deaver, Dr. S. D. Risley and Dr. Arthur W. Watson, who have been elected Professors.

The Copyright Bill.

Speaking of some of the effects that will follow the passage of the International Copyright bill, the Editor of *Harper's Weekly* says: The passage of the International Copyright bill by the House of Representatives is an event of great importance. It will pass the Senate probably without delay, and the President has already expressed his approval of it. This is the final success of an intermittent effort of more than fifty years, during which the most eminent American statesman have advocated the measure, and projects of law and treaties have been carefully discussed. The opposing forces have been of various kinds. Chiefly they have been the general conviction that literary property is different in kind from other property, and that the law has acknowledged the difference; that the measure would heighten the prices of books; and that it was not for the interest of American printers and publishers.

The reciprocity of action upon the part of other governments which the act contemplates will follow its passage, and then the results of the measure will appear. Its effect is, in brief, to extend the author's copyright to all countries in which his work is sold, without injury to the interest of the local manufacturer and publisher. It removes from a great industry the imputation of unfairness, and throws off the burden which has hitherto oppressed literary effort in this country. The bill is emphatically a measure of fair play, which will inevitably promote a friendly feeling between all the countries which it affects. In the first week of the session the House has led the way in

legislation which honest men in every country will approve. [It is to be feared that *Harper's Weekly* has been too sanguine about the passage of a bill the chief interest of which is moral.]

Bone Grafting.

Mr. A. G. Miller, in the *Lancet* for September 20, reports the history of a case in which he used decalcified-bone chips successfully to fill up a large cavity in the head of the tibia. A piece of the rib of an ox was used, being first scraped and then decalcified in a weak solution of hydrochloric acid. After cleansing by pressure, it was placed for forty-eight hours in a carbolic-acid solution, one to twenty, then removed, and cut into small pieces. During the scraping out of the cavity in the knee, preparatory to the grafting, a number of small pieces of bone were removed. These were placed in a solution of boric acid for use later in the operation. The cavity was then stuffed with the decalcified-bone shavings, the pieces of fresh bone being added last. The cavity thus filled was about two inches in diameter. Granulation and healing took place rapidly; the only pieces of bone that became necrosed were from the patient's own body. Mr. Miller is convinced, from his observation of this case, that the healing of large bone cavities, the result of injury or disease, is greatly facilitated by stuffing them with decalcified-bone chips, that these are superior to fresh bone, and that fresh bone not only is of no use, but actually hinders the process of granulation. *New York Medical Journal*, November 29, 1890.

Public Health in New Jersey.

In the annual message to the Legislature by the Governor of New Jersey, attention is called to the gradual increase of typhoid fever in most of the cities of the States. This is accepted by sanitary authorities as indicating inadequate sanitary administration. To protect the people from this and other pathogenic diseases, the Governor says there should be systematic house inspection, and the removal of waste products in cities should be systematically and rigidly enforced. Attention is called to the Tenement-house law, in force in New York, as being one which would aid in securing more healthful homes for the people. It is stated that the use of wells and cesspools in cities of over five thousand inhabitants is generally such that there should be prohibitory or strong legislative regulations.

The message contains a recommendation that summary control should be given to the State Board of Health or some proper authority over streams of potable waters so as to prevent their pollution, and further recommends that the impounding of waters for artificial lakes should be restrained by law, as such acts cause partial stagnation, and thereby render the locality subject to disease; also power be given to the State Board to act in cases of local nuisance where the authorities of the district fail to act.

The Relief of Pruritus.

The *Medical Record*, December 20, 1890, says:

Itching is of various kinds, and depends upon a great variety of cutaneous lesions. In some instances there are no eruptive features connected with sensation, and we have an independent disease without eruption, excepting such as continual scratching will produce. In the *Record* of October 18, we published a scientific study of "The Sensation of Itching" from the pen of Dr. Bronson, which points out the reasons why people itch. What will stop the itching is a question which is of equal interest both to the sufferer from pruritis and the physician called upon to relieve it.

Dr. Bronson tells us, among other things, that scratching relieves itching by directing the excitation into freer channels of sensation sometimes, especially when severe, substituting for the pruritis either painful or voluptuous sensations. It is scarcely ever necessary for the physician to prescribe this means of relief. It has been a household remedy for ages, and the infant has mastered its application before it graduates from the cradle. More frequently we have to order our patients not to scratch, because the relief attending the act is evanescent, and the damage done to the skin in a moment may take weeks or months to repair.

It is needless to say that this injunction can frequently not be enforced by any means short of the straight jacket.

Fortunately there are a few, out of the many recommended, drugs for the relief of pruritus, which have a more or less pronounced and lasting effect.

Menthol is not a new remedy in this sense, but it has of late received consider-

able attention. Dubreuil and Archambault have studied its effects in a variety of pruriginous affections, and find that with it they can succeed in calming itching of whatever nature it may be, but that it has its greatest effect in those cases where scratching provokes or keeps up the lesion of the skin and the pruritus. This is particularly true of urticaria, certain eczemas, and the pruritus following scabies after the itch mites have been destroyed.

In urticaria a ten per cent. solution in alcohol or almond-oil can be employed, and in the acute and subacute forms is said to be capable of bringing about a speedy cure. For itching eczemas a five to ten per cent. solution in oil may be used, or from two to five per cent. of menthol may be added to oxide of zinc ointment. Upon excoriated surfaces and mucous membranes, care must be exercised not to use too strong applications, as a disagreeable sensation of burning may be determined, and for such parts an oily rather than an alcoholic solution should be chosen. Again, applications should not be made to the whole surface at once, since the sensation of cold which accompanies the anæsthetic action is in some cases extremely disagreeable.

In pruritus ani, perineal and genito-crural eczema, the results of treatment by menthol are said to be very favorable. We must not confound pruritus, as a symptom of numerous cutaneous diseases, with pruritus, an independent disease of nervous origin. In the former the underlying skin affection must be treated in an appropriate way, while anti-pruritics are relied upon to secure as much relief as possible.

Use of the Obstetrical Department of the Philadelphia Hospital for Teaching.

At a meeting of the Board of Charities and Correction, January 12, a committee appointed to consider the application of Dr. B. C. Hirst, one of the obstetricians to the Hospital, for permission to use the obstetrical department of the Philadelphia Hospital for the purpose of instruction to students, submitted an answer, in which they said they were fully aware of the importance of furnishing means for the education of physicians by the use of the hospital; but declined to approve of Dr. Hirst's proposition.

In face of the assurance that the possibility of infection was excluded, they said there was a possibility that proper precautions might be disregarded. The answer of the committee also alluded to the position taken by the late Miss Fisher, head nurse of the hospital, who had said that such a use of the department should not be permitted on any terms while she was living, and stated that the same opposition was felt by the present head nurse.

They also said if they felt bound to protect a corpse from examination in the cause of science, could they, with propriety, compel a living woman to submit to such exposure as is inevitable in the proposed scheme as the price of admission to a public hospital? They, therefore, declined the request, and put their answer on record for the information of their successors.

Nothing New Under the Sun.

The *Edinburgh Medical Journal*, December, 1890, says that it is curious to find that something like the present-day theories of a struggle between the microbes and leucocytes must have been in vogue more than a century ago, otherwise this bit of satirical burlesque could scarcely have been written and played.

Persons—The Devil as Hellebore, President of the College; Dr. Last, a new Licentiate; other Doctors and Pupils.

Hel. . . . Proceed we now to the lecture! Brethren and students, I am going to open to you some notable discoveries that I have made respecting the source or primary cause of all distempers incidental to the human machine. And these, brethren, I attribute to certain animalculæ of piscatory entities, that insinuate themselves through the pores into the blood, and in that fluid sport, toss and tumble about, like mackerel or cod-fish in the great deep. And to convince you that this is not a mere *gratis dictum*, an hypothesis only, I will give you demonstrative proof. Bring hither the microscope!

Enter a SERVANT *with a microscope.*

Dr. Last, regard this receiver. Take a peep.

Last.—Where?

Hel.—There. Those two yellow drops there were drawn from a subject afflicted with the jaundice.—Well, what d'ye see?

Last.—Some little creatures like yellow flies, that are hopping and skipping about.

Hel.—Right. Those yellow flies give the tinge to the skin, and undoubtedly cause the disease. And now for the cure! I administer to every patient the two-and-fiftieth part of a scruple of the ovaria or eggs of the spider; these are thrown by the digestive powers into the secretory, there separated from the alimentary, and then precipitated into the circulatory, where finding a proper nidus or nest, they quit their torbid state, and vivify, and upon vivification, discerning the flies, their natural food, they immediately fall foul of them, extirpate the race out of the blood, and restore the patient to health.

Last.—And what becomes of the spiders?

Hel.—Oh! they die, you know, for want of nutrition. Then I send the patient down to Brighthelmston, and a couple of dips in the salt water washes the cobwebs entirely out of the blood.—From Foote's *Devil on Two Sticks.*

Action of Salol on the Kidneys.

In a report in the *Centralblatt für Chirurgie*, October 25, 1890, it is stated that Kobert has pointed out a possible danger in the use of salol which is of importance. Salol is so constituted that it undergoes conversion into carbolic acid in the system of an animal, so that any dose is equivalent to about one-third the same quantity of carbolic acid. Hesselbach ordered for a strong girl, twenty-two years old, with acute articular rheumatism, fifteen grains of salol to be taken every two hours; but she was given by mistake double this dose, so that in eight hours she took 120 grains. This was followed by sopor, suppression of urine and death in four days.

Kola Essence Stimulant.

The *Chemist and Druggist*, November 29, 1890, gives the following formulæ for kola cordials, or what it calls "pick me ups."

℞ Tincture of kola (1 in 20) . . . 1 ounce
Essence of vanilla . . . . . 40 minims
Simple syrup . . . . . 4½ ounce
Water to . . . . . 8 "

Mix.

Dose: An ounce or more.

Roast kola nuts like coffee, grind and make into a fluid extract (1 in 2) with 25-per cent. spirit. Use this in the following:

℞ Fluid extract of kola . . . . . 10 drachms
Tincture of canella (1 in 10) . . . 1 drachm
Essence of peppermint . . . . 8 drops
Mucilage . . . . . 4 drachms
Syrup of orange . . . . . 1 ounce
Water to . . . . . 5 "

Mix.

Dose: From a dessert to a tablespoonful three or four times a day.

If the latter preparation is to be kept long it is the better for the addition of a half drachm of spirit of chloroform to each ounce.

NEWS.

—Mr. Edward Bellamy, F. R. C. S., senior surgeon of Charing-cross Hospital, London, died January 4, at the age of forty-eight years.

—A meeting was held at Elmira, N. Y., January 16, at the office of Dr. H. A. Argue for the purpose of establishing an academy of medicine.

—It is reported from Upper Sandusky, Ohio, that Dr. Neal Hardy recently amputated at the hip joint, after opening the abdomen, so that an assistant might compress the aorta.

—Dr. Jacob H. Gallinger, who was, on January 20, elected to succeed Mr. Blair as a United States Senator from New Hampshire, is 53 years old. He began life as a printer's boy, and has been by turns a printer, editor and physician.

—The State Board of Medical Examiners of Colorado met January 6, 1891. Only four candidates appeared for examination, though some thirty or forty applications were on file. Nothing outside of the usual routine business came up for consideration.

—On January 22, Prof. Sonnenburg exhibited at the Charity Hospital, Berlin, a consumptive patient who had been subjected to a surgical operation upon the chest after inoculation with Koch's lymph. The patient was said to have improved decidedly.

—It is reported under date of January 26, that a drug trust, with a proposed capital of $60,000,000, has been proposed to some wholesale drug manufacturers in Detroit, Michigan, by a promoter from New York, who represents capitalists in New York and London.

—A "Central Throat Hospital and Polyclinic Dispensary" has been started in Brooklyn, and is apparently endeavoring to supplant the Brooklyn Throat Hospital, which has been in operation for about two years. Sharp rivalry and sharp practice seem to characterize the competition.

—At the annual meeting of the Lackawanna County, Pa., Medical Society, January 13, officers for the ensuing year were elected as follows: President, Dr. Paine; First Vice-President, Dr. Barnes; Second Vice-President, Dr. Pennypacker; Secretary and Treasurer, Dr. Ward; Censor, Dr. Gardner; Librarian, Dr. Gardner.

—The President has received a package from Minister Phelps, at Berlin, containing five vials of Koch's lymph, and he has distributed them as follows: Two vials to Surgeon-General Hamilton, of the Marine Hospital Service, Washington, and one vial each to the Polyclinic Hospital, of Chicago, the Charity Hospital, of New Orleans, and the City Hospital, of Indianapolis.

—At the annual meeting of the Camden (N. J.) Medical Society, January 8, 1891, the following officers were elected: President, H. F. Palm; Vice-President, Alexander McAllister; Secretary, Joseph H. Wills; Treasurer, George T. Robinson; Reporter, Daniel Strock; Librarian, H. F. Palm; Standing Committee, H. Genet Taylor, A. M. Mecray and E. P. Townsend.

—Judge Allison, in the Court of Common Pleas of Philadelphia, decided on January 24, that members of the medical staff of the Philadelphia Hospital are neither officers, subordinate officials nor employés of the city, and that under the rule which the Mayor and heads of departments had power to make, it is the duty of the Board of Charities and Correction to elect the hospital staff annually.

—At the annual meeting of the Montgomery County, Pa., Medical Society, held January 21, the following officers were elected for the ensuing year: President, George N. Highley, Conshohocken; Vice-Presidents, G. F. Hartman, Port Kennedy, and Mabel W. Moore, Norristown; Recording Secretary, H. H. Whitcomb; Corresponding Secretary, J. K. Weaver; Treasurer, E. W. Corson.

—Dr. William J. McClure, aged 53, died at York, January 24. He represented Adams county in the Legislature in the session of 1877–78. He was also Coroner of this county from 1867–70, and held other offices prior to his removal to York, in 1880, to practice medicine. He was a graduate of the Baltimore City College and a member of the York County Medical Society. He was a native of Madison county, Indiana.

—William Faulk, living at Laurel Station, Pa., killed his wife in a fit of religious frenzy on January 23. The next day a warrant was issued for the arrest of George Knauff as an accessory before the act. Faulk declares his religious insanity was inspired by the hypnotic influence of Knauff, who claimed to be another Messiah, and ordered him to kill his wife. This Faulk did, and officers are now hunting Knauff, who has disappeared.

—The newspapers have been stirred up by the assertion that on January 18, one hundred and thirty-two Knights Templar contributed pieces of their skin to surgeons, who transferred them to a fellow-member, who had had a cancer removed from his thigh. Enough skin was secured to cover one hundred and forty-four square inches of surface. The operation took place in the Emergency Hospital, in Chicago, and it was said that the result would not be known for ten days.

—The death of Henry M. Martin, Surgeon in the United States Navy, was announced January 19, 1891. He was born in Philadelphia. He was appointed Assistant Surgeon in the navy May 21, 1870, and was promoted to Passed Assistant Surgeon on June 8, 1874. He was with the Alert, on the Asiatic Station, from 1875 to 1878, and was promoted Surgeon on April 24, 1884. He was attached to the receiving ship, St. Louis, at League Island, from 1886 to 1888, and afterwards to the Swatara, on the Asiatic Station. He was retired in November last on account of ill health.

OBITUARY.

ROBERT A. TAYLOR.

Dr. Robt. A. Taylor, a promising young physician of Duluth, died December 21, 1890, age 31, of typhoid fever. Dr. Taylor was a graduate of the Jefferson Medical College, Class 1886. He served one year at Blockley Almshouse as resident physician. Dr. Taylor was gathering about him a very large practice. Surgery was his special forte. He leaves a wife and one child to mourn his loss. His remains were brought on to this city for interment.

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Clinical Lecture.

APPARENT HEMIPLEGIA FOLLOWING THE GRIPPE.—ACUTE CATARRHAL JAUNDICE.

BY MORRIS LONGSTRETH, M. D.,

PHYSICIAN TO THE PENNSYLVANIA HOSPITAL.—LECTURER ON PATHOLOGY, JEFFERSON MEDICAL COLLEGE.

Gentlemen: The case before us, which was sent as one of hemiplegia due to the *Grippe*, will serve as an illustration for a talk on the many effects produced by the epidemic influenza of last winter. This woman presents the following history: She is forty-seven years old, single, and has been nine years in this country. By trade she is a dressmaker. She comes to us with the history of a partial loss of power in the right arm and leg; not that she is unable to move these members, but she cannot walk nor use her limbs with any precision or skill; in fact, she cannot do any of the useful things essential in daily life and work. She has no family history which bears upon her case. Personally she has always been healthy. There is an indefinite history of enlarged glands some time ago; but she states that she has not seen a doctor for eighteen years. In common with many of the rest of us, she had an attack of influenza last Christmas, and has not been well since. Her present trouble dates from four months ago. It began in a curious way for hemiplegia—at least of a centric origin. She experienced a feeling of malaise, of being out of sorts; a pain appeared in her right hip, not connected in any way with the abdominal cavity. We can scarcely call it a pain; it is rather a twisting sensation, unusual in character and indefinite in nature. This feeling spread up and down in her body, and took away the power of movement. There was a sensation of loss of power, which lasted only for a little while. After experiencing tingling in the fingers, the loss of power became less apparent, lasting on an average for twenty minutes, and coming and going. There were no head symptoms, and the eyesight was good. Ever since her experience with the influenza, her digestion has been impaired, her appetite and bowels were upset, and a general indefinite run-down condition of health has settled upon her. There has been at no time any evidence of the loss of power in head or face. On protuding her tongue, we can see that she holds it straight out. The tongue is covered irregularly with patches and her breath is heavy. Her heart and lungs are normal, and nothing exists in the abdomen abnormal that we can detect. Flocculi of mucus are found in the urine, with a slight trace of albumin, mucous corpuscles, imperfectly formed epithelial cells, and bodies which approximate in their appearance hyaline casts. Probably the mucus had collected in strings, giving this simulation of hyaline casts. Crystalline material is abundant in the urinary secretion. This shows that the kidneys are able to separate the waste products of the blood fairly well. I believe that, when enough uric acid, urates, oxalate of lime, etc., are present, even if there is sufficient change in some parts of the kidneys to form casts, it will make but little difference in diagnosis or prognosis; for this shows that the kidneys are acting in a fairly normal manner.

The specific gravity is above 1.020, showing that there was no deficiency in solid matter excreted. The grip of each hand is not good at all, being poor in each instance. She moves her limbs quickly, however, and without hesitation. There has been no rise in temperature. Before deciding exactly what condition we have before us, let us go a little farther into the digestive symptoms. You will notice that the tongue is smoothed off, as if it had been skinned. This is diagnostic of a coating which for some reason

or another has desquamated, similarly to a blistered surface of the skin. It should be velvety and natural in appearance, or else essentially coated. A patch of coating has appeared from day to day on the tongue, creeping around. It sheds off rapidly, either from contact with the food or teeth, or because the desquamation is severe. This shows that the irritation must be severe and is even more unfavorable than that the tongue should remain heavily coated. The coated tongue is dry naturally; it becomes no moister after wetting. Apply your finger to this tongue, you will find that, after one or two touches, the surface of the tongue is dry. It is likely that this intense irritation of mucous surfaces has spread down the alimentary tract since last January, acting almost as severely as if one-half the surface of the skin were blistered. That this effect has been produced by the "grippe" is well known. Many cases have recovered perfectly. In many cases of the influenza, the respiratory mucous membrane was left in a bad condition. This effect can be seen more sharply and distinctly, and hence is more liable to be well treated and the condition corrected. But the stomach and intestines are more used to non-attention; their symptoms are not so sharply marked; the patient is able to bear up under them better. But in this woman we have a story of depression in nutrition which is a fair example.

What proof can we seek in this woman to find if her story of serious illness is true. I have been in the habit of looking at the finger nails, for this reason: that, in the various fevers and the many other conditions which depress nutrition, the hair comes out in convalescence or scales drop off the skin. In febrile processes there is a check of the natural growth of the tissues of the body. On the return of health these tissues start again to grow. If you will examine the roots of the hair in a convalescent patient, you will see that the ends of the hair are splintered and weak. In the skin this condition is not so perfectly or readily seen; but in the finger nail we find the same nature of epithelial growth. They stop growing in serious diseases, and bear their records for long periods of time. In this woman, four months after her attack, it is too late to look for the record of serious illness in her hair, but the nails of the hand bear record for many months, that of the thumb for nine months, while the great toe nail is characteristic for two years. In hemiplegia there is a stop of growth on the affected side; the nutrition is impaired just as it is in a broken arm. On looking at this woman's hand, we find a third way up on the thumb nail, half way down on the finger nail and on the little finger nail at the end, a marked depression or thinning out of the nail. Normally we have a smooth polished nail, but in these cases there is a depression and a lack of appearance of strength which is characteristic when once noted. If this were a case of hemiplegia, occurring four months ago, there would be a depression on the affected side later than that one produced by the influenza; but we find on examination that this is not so. The question presents itself, is the "grippe" a sufficient cause for the production of hemiplegia? We know what part intestinal mischief bears in the production of marked nervous trouble; we know the effect injudicious food has in children in causing convulsions, but it is hard to say what amount of disease the curious epidemic of last winter is capable of leaving in its path.

The electrical examination does not favor at all the hemiplegic view; the reflexes on the right side are somewhat exaggerated, but this I believe is due to want of proper exercise and use.

In considering the treatment of such a case as this we must remember that the tongue points to the existence of a general condition of digestive depression. The feeding is one of the most important points. In catarrh of the intestines, the treatment varies according to the intensity of the symptoms. The use of some sedative application, such as bismuth, is indicated, to relieve the irritation which exists. This is shown by the discoloration of the mucus seen in the stools, similar to the white patches found on the tongue. To restore intestinal action and secretion, minute doses of calomel can be very advantageously combined with bismuth. We have been giving this woman every three hours a one-twenty-fourth of a grain of calomel with ten grains of bismuth. The tongue may not get free, but even if it coats over, it will be a gain, as we have shown. This simple treatment is rapidly improving this woman's condition.

Acute Catarrhal Jaundice.

The next patient, a woman sixty years old, has nothing in her family or personal history which bears upon her case. She

says that she has been subject to "liver attacks," in which the chief symptoms were nausea, choking, and a band-like pressure-sensation over the epigastrium. The skin never became yellow, and she had no severe colic or pain in the abdomen. Her present attack began with a chill, a severe pain in the region of the liver, and nausea, followed shortly by fever. Almost immediately jaundice appeared, and the bowels obstinately refused to act. The temperature was 102⅖°, falling on the next day to almost normal. Night and morning it remained nearly even, but it was irregular throughout the day. Occasionally she experienced a chill. Enemas of soap and water were tried ineffectually. Subsequently relief was obtained by the addition of glycerine. Since October 1, she had no serious rise in temperature until the 24th. Since the 26th, she has been taking one or two compound colocynth pills. Her movements, which had been slate-colored before, showing no evidence whatever of bile, now became darker, and the tongue cleared up. It had been thick, yellow, swollen and dry. The conjunctivæ, which have been yellow, still remain so, due to thickening, not to staining. The face never was very yellow, the color being better seen on the abdomen. Her appetite and sleep have each improved. Her bowels move regularly, and she is gaining strength. The colocynth acts with more and more effect. She was taking three pills; she is now down to two. This will be reduced to one in a short time. The urine, which was dark in color and contained considerable bile, now shows on testing that that element has disappeared.

COMMUNICATIONS.

TREATMENT OF CARBUNCLE.

BY ARTHUR E. SPOHN., M. D.,
CORPUS CHRISTI, TEXAS.

Several years ago I was called to see a patient, living fifty miles away in the country—a very frequent occurrence in Southwestern Texas, where pastures contain from ten to five hundred thousand acres in one enclosure. I met on the road a man suffering fearfully with carbuncles. He had three: one on his face, one on his wrist and one on the back of his neck. I don't think I ever saw any person suffer as he did. The only medicine I had with me which I thought could give relief was a saturated solution of chloral hydrate in water and glycerine. Of this I poured one teaspoonful over bread poultices, and applied them to the carbuncles, expecting as soon as the man was relieved of pain to make the ordinary incisions. To my surprise he was soon relieved of pain, and the next morning the carbuncles looked so much better that I concluded to continue the treatment, without making incisions. I did not see this man again for about two months, when he came into my office for a prescription of the medicine I used, saying that he had had no more trouble after I left; that his carbuncles had diminished in size without sloughing, and that they soon got well. The carbuncle on his back was fully three inches in diameter. He has had several carbuncles since, using the same treatment successfully. I have not seen him recently; but I am told that he is falling off in weight. I did not examine his urine at the time, but think he is probably suffering with diabetes.

I have now under treatment four cases of carbuncle. It is strange that nearly all the cases of carbuncle I have seen in this climate occur during February, March and April. This fact has impressed me with the idea that they are due to some climatic condition. Two of my patients have carbuncle on the back of the neck, one on the back, one on the side of the neck. I am treating these cases with a ten per cent. solution of chloral hydrate in glycerine and water, applied constantly by means of absorbent cotton. The patients are doing well and having little or no pain. Internally I give sulphide of calcium. I have a patient who had carbuncle in April, 1887, and again in September, accompanied by numerous boils. He has diabetes, his urine containing six grains of sugar to the ounce. He now has caries of the ilium on the right side. I removed the carious part twice, but the bone would not take on healthy action. I am now irrigating the diseased surface with a ten per cent. solution of phosphoric acid. The patient seems to be improving; and there is very little discharge from the two sinuses leading down to the bone, one of which passes in the direction of the sacro-iliac articulation.

While speaking of this patient, I wish to mention an artesian well in this city, the water of which is very beneficial in cases of diabetes. The well is about 400 feet deep; flows about five feet above the surface of the ground in a small stream; and its capacity

is about 60,000 gallons daily. This water contains principally chloride of sodium and sulphate of sodium, strongly impregnated with sulphuretted hydrogen gas. It sparkles in a glass like champagne. It is laxative, in doses of an ordinary glassful; in larger quantities it is a brisk cathartic, causing little or no inconvenience. The water belongs to the city and is free to all. It will not bear transportation under the present methods of bottling.

I was very much pleased when I read the lecture on the treatment of carbuncles by Prof. Verneuil of Paris, in the REPORTER of February 11, 1888. I have used carbolic acid, but not as a spray. I think the treatment by chloral is quite as successful and more easily carried out. The principal merit in the two methods is the avoidance of the old crucial incision, which I find still recommended in my latest works on surgery. I never make incisions into a carbuncle; they are useless and painful, and expose a fresh surface to the virus. It is impossible to open every cell, as it were; and I consider the crucial incision to be a relic of surgical barbarism. There may be cases, with an accumulation of pus, requiring an incision; but they are very rare. A man came into my office some months ago, and asked me to look at the back of his neck. He was a railroad magnate, and of course, very anxious to get well. He had been told he was getting a carbuncle, and that a crucial incision was necessary. I don't know about the carbuncle, but I do know he had the incision. The skin on a man's back, is—as near as I can estimate it—about a quarter of an inch thick; in this case I think it was about three-quarters of an inch; the length of each incision was two inches, and when I looked at them I thought, if I had my choice between such an incision and a two-inch carbuncle, I would take the carbuncle. Whether the man ever got the edges of that incision together or not is questionable; but I fancy he carries a crucial brand, which in Texas is considered quite an ornament.

—The first patient in this country to receive the lymph inoculation, died, in New Haven, Conn., Feb. 2, and another lymph patient, who has been under treatment for nearly two months, was then at the point of death. The first named was a man but little over thirty years of age and was not in an advanced stage of consumption when he began receiving treatment.

RESECTION OF THE OPTIC NERVE.

BY L. WEBSTER FOX, M. D.,
PHILADELPHIA.

The loss of an eye under any circumstances or conditions is a very serious affliction. The vacant stare and dull look of an artificial eye can never compensate, for one which may be disfigured by a leucoma or partial atrophy, for even such eyes are preferable to wearing glass ones, be they ever so well matched. No matter how smooth an artificial eye is polished, sooner or later the secretions corrode its surface and those irregular projections cause more irritation, and the result is more offensive secretions, which become dry and harden upon the surface of the eye, usually appearing as a horizontal band over the cornea. To morbid individuals, especially women, these results are, to say the least, disagreeable, and to the observer equally so.

The question has often arisen: How can we best overcome the necessity for an enucleation. Eyeballs are removed, as a rule, for three indications:

1. If wounded or cut in the ciliary region (the danger zone), to prevent sympathetic ophthalmia.
2. If atrophied, to make room for an artificial eye.
3. For new growths (tumors).

The first indication is the most important. If we can prevent sympathetic ophthalmia we also may save an eyeball; but by saving the eyeball we do not necessarily prevent sympathetic ophthalmia. In the second case an atrophied eyeball is disfiguring and is removed for cosmetic purposes, and because it may be a hiding place for new bone development, which may remotely produce sympathetic irritation. I have frequently removed a stump and found bone shells with edges as sharp as a splinter of glass. With such a foreign body irritating it, an optic nerve might readily be the focus of migratory ophthalmia.

Where a tumor exists we have but one recourse—enucleation.

At the October meeting of the *Société D' Ophtalmologie*,[1] of Paris, the question of resection or laceration of the optic nerve was discussed, especially by Drs. De Wecker, Chauvel, Gillet de Grandmont and others. Dr. De Wecker, who has had exceptional

[1] *Recueil D' Ophtalmologie*, October, 1890.

facilities for putting into practice the text of his teachings, made the following remarks.

"I propose to continue the campaign I have undertaken against the abuse of enucleation, and I firmly believe that by making more popular the simple resection of the optic nerve in cases where we have danger of migratory ophthalmia, no more eyes will be taken out, except when they are the seat of a neoplasm (tumors).

"If the transmission of migratory ophthalmia by the optic nerve is confirmed (and I am convinced of it), the simple resection of the nerve will afford a sure means of preventing it. Boucheron and Schoeler's method, which includes cutting the ciliary nerves, does not, however, answer the purpose. The only way to prove conclusively that resection of the optic nerve can take the place of enucleation is that a large number of resections shall be made and the results noted. The operation must also be made as simple as the operation for enucleation. If we were to follow the complicated operations as described by Schweigger or Pagenstecher it would certainly never become popular.

"Being aware of the difficulties which beset one, and fearing that in the midst of operation, by an unlucky cut of the scissors, a hemorrhage should follow, it occurred to me to forego the section of the nerve, which is the most difficult part of the operation, and simply to tear off the nerve near its optic entrance. This idea was suggested to me by the cases recorded, in which the eyes were torn out with the optic nerve attached, and also the savage custom of the Tyrolese wrestlers, who put eyes out by introducing their thumbs into the orbits on the temple side. I suppose that such displacement of the globe could only be effected after tearing off the nerve at its optic attachment. On a recent visit to the Tyrol, a wrestler presented himself with his eyeball hanging on his cheek and asked whether the eye could be replaced and be useful to him. Being answered in the negative, he seized the eyeball, tore it off and flung it to the ground. My experiments upon the cadaver were made with a view to ascertain whether or not a nerve could be torn. With my double hook I have never been able to tear off the nerve at its entrance into the orbit, even when pulling with all my strength. All I could do was to sever the nerve by pulling with the hook; in other words, the hook cut its way through the nerve. On several occasions I succeeded in tearing the eyeball from the nerve, the vitreous humor escaping through the opening made by the head of the nerve disappearing. I also tried to tear the nerve off as it entered the orbital foramen; but I signally failed in this also. We have a well-known case, in which a drunken man fell against a door, the key of which was projecting, and the eye thrust itself through the ring of the key, the nerve being completely severed. In another case, a horn of a cow drove the eye into the maxillary sinus. Here also the nerve was severed. In these instances the traction did not act directly and exclusively on the optic nerve, as in my experiments on the dead body. In the case of the intoxicated man who thrust his eye through the ring of the key, all the weight of his body exerted a traction on the whole funnel-shaped bundle of muscles of the eyeball. The traction pressed on their insertions around the passage of the optic nerve into the orbit, and tore them off from their insertion simultaneously with the sheath—to which they are attached. This is also the reason why we do not find the tearing off of the nerve isolated; the internal rectus being always detached in this sort of traumatism. We must therefore give up the combined operation of resection and tearing, in place of the simple resection. All that is left for us to do is to try to improve the operation of simple resection; to make it always feasible and easy so as to supplant the repulsive enucleation."

M. Chauvel who made some experiments upon the elongation of the optic nerve stated that he was never able to tear the nerve of the human eye, although he was able to do so in rabbits.

M. Gillet de Grandmont corroborated Dr. De Wecker's statements, especially those relating to tearing the globe from the nerve, and related an instance in which a woman in a fit of melancholy, suddenly thrust her index finger and thumb into her orbit. Her strength was so great that with her left hand she took hold of the eyeball, tore it off with three centimeters of the optic nerve, and threw it on an adjacent bed. This was the work of a few seconds. She made a similar attempt on the right eye, but the attendant seized her right hand, only, however, after the patient had succeeded in thrusting her index finger under the inferior muscles and had torn them from the globe. A severe hemorrhage followed, no other complications arose,

and in a few days she recovered the sight in her right eye.

We miss very much in the foregoing remarks a description of the exact way in which De Wecker, Grandmont and others perform resection of the nerve.

A few years ago Mr. Brudnell Carter and Dr. T. Herbert Bickerton performed an operation for opening the sheath of the optic nerve in optic neuritis. Mr. Carter designed special instruments for this operation, and the difficulties were made easy for exposing the optic nerve. In performing this operation, I found but little difficulty in following Carter's method. The one obstacle was, that the orbital fat would constantly get in the way. Dr. Shakespeare, who assisted at this operation, suggested a speculum shaped like Sims's uterine speculum. With this instrument the difficulties were overcome in a subsequent operation.

If resection of the optic nerve can be performed with complete protection against sympathetic ophthalmia, it will be a boon to many unfortunates. The wearing of an artificial eye is as annoying as it is unsightly.

The details of the operation for resection are essentially as follows. The lids are separated with the ordinary ophthalmostat; a vertical incision is made through the conjunctiva over the insertion of the external rectus muscle; the conjunctiva is dissected off as far back as the external canthus will permit. This exposes completely the muscle. Two silk threads are then passed through the muscle near its tendinous insertion. These threads will be required in a subsequent stage of the operation, to unite the detached muscle to the eyeball. The muscle is then cut and drawn to the temple side. This exposes the globe. With curved scissors, all tissue is then separated from the eyeball. The optic nerve is found by passing a hook—which is nothing more than a strabismus hook bent at a right angle. This hook brings forward the nerve, and then the retractor is passed downwards until it meets the nerve, and is then passed down and out, keeping the adipose tissue out of the way. A second bent hook is inserted under the optic nerve, and also pressed backward. A certain portion of the nerve becomes exposed, and with a delicate flat forceps the nerve is grasped and held firmly. This is to prevent hemorrhage from the ophthalmic vein and artery (central) after the cut with the scissors. The eyeball is rotated forward, so that the non-severed nerve becomes exposed and a small piece of its bulbar end is cut off. By keeping pressure on the orbital end of the nerve for a few minutes, all danger of hemorrhage is aborted. The eyeball is then rotated into place, and the external muscle is re-adjusted. Over this the conjunctiva is replaced, and it is held in position with black silk, which may be removed in three days. Antiphlogistic dressings are applied day and night for several days. Very little reaction follows, and in a week or ten days the eye has assumed its normal appearance, with no disfigurement, and the action of the muscle is complete.

CASE OF ULCERATIVE ENDOCARDITIS.

BY C. A. VEASEY, M. D.,
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The subject of this account was a woman, twenty-five years old and married, who was admitted to the Jefferson Medical College Hospital, under the care of Dr. F. P. Henry, Visiting Physician, on June 25, 1890. Three weeks before, she had been very much frightened during a fire in the neighborhood of her home, and at the time she suffered a great deal with palpitation of the heart, which was soon followed by paroxysms of præcordial oppression and pains of great intensity shooting into the left axilla and down the left arm, with dyspnœa of the most painful character. During the paroxysms her face became cyanosed, and she expected every moment to be her last, her facies indicating great anxiety and terror. After admission to the Hospital she had paroxysms similar to those described by her friends. Sometimes there would be no paroxysm for three or four days; then she would have a most violent one, lasting for an hour or more before relief could be given, and being followed by a number of lighter attacks. On some days there were as many as eight in the twenty-four hours.

When first admitted to the Hospital the woman was able to walk around the ward; but after July 1, she was confined to her bed. During the greater part of the time she was compelled to use a bed-rest, and to remain in a half-sitting posture, on account of the great dyspnœa with which she suffered. She had a severe cough with, at first,

scanty expectoration, soon this was superseded by a profuse muco-purulent expectoration, frequently streaked with blood. She also complained quite often of chilly sensations, so that external warmth was used almost constantly. Her finger-nails were blue, her tongue red and swollen and marked with indentations by the teeth. A few days after her admission there was developed severe and excruciating pain in the region of the right kidney, and the abdomen was quite tender to the touch. There was also much pain in the region of the right nipple; but it was little compared with that on the other side. The patient's appetite was very poor; in fact, she could take nothing but some liquid diet, and towards the end of her life a small quantity of stimulus.

The woman said that she was six months pregnant; but her pulse was always so rapid that the fetal heart sounds could not be distinguished with absolute certainty.

Physical examination of the heart revealed a loud mitral systolic murmur, transmitted to the axilla and to the angle of the scapula. The murmur was so marked that it seemed to take the place of the first sound of the heart. The second sound was changeable, being sometimes pronounced and at other times feeble. The area of cardiac dulness was increased in both directions. The impulse was diffused, and the pulse was feeble, irregular and rapid, ranging from a hundred and twenty to a hundred and sixty beats per minute. Over the lungs percussion dulness was found in spots. Respiration was feeble and rapid—usually thirty to fifty per minute—and râles were heard in various parts of the lungs. No pulse could be detected in the right arm at any point. The urine was scanty, of a yellowish-red color, acid, with a specific gravity of 1.030, on boiling it deposited albumin to about half its bulk; it contained no sugar, and a few pus-cells and some hyaline casts were found on microscopical examination.

The temperature record was quite peculiar. At the time of the patient's admission to the Hospital the temperature was 100° F.; the next evening it was 101°; the next morning it was 100°. That evening it was 102°; and there was a slight fall by the following morning. On the evening of the next day it was 103.4°, it fell the next morning to 98.1°, and rose again in the afternoon to 102.2°. The temperature was of this irregular character for two weeks, making wide variations, after which, up to the time of death, which was July 15, it varied from normal only about one degree.

The diagnosis of the case was: ulcerative endocarditis and miliary tubercle. It was also thought that the absence of pulsation in the right arm was due to the presence of a thrombus in the subclavian artery, but it was supposed that this was so covered by the clavicle that no tumor could be either felt or seen.

At the autopsy, the pleural sac was found to be adherent to the chest-wall on both sides. The lungs were filled with miliary tubercles, and infarcts were found at different points, some of which had caused rupture of the vessels, the adjoining lung tissue having become œdematous and soft.

The heart was largely hypertrophied, the left side was firmly contracted, while the right contained a clot. Upon opening the heart both ante-mortem and post-mortem clots were found on the right side, and a large ante-mortem clot was found at the aortic valve. One leaflet of the mitral valve was entirely absent, and there were vegetations on the side from which the leaflet was absent which covered at least as much space as a dime would cover. These vegetations were about a quarter of an inch deep and had ulcerated.

In the abdominal cavity all the organs were congested. There had been peritonitis with adhesion on the right side; the liver and kidneys were full of miliary tubercle and infarcts—only about one-half of the left kidney and one-fourth of the right being in a state to excrete urine. The spleen was enlarged, softened and full of miliary tubercle. No tubercles were found in the intestine. The uterus contained a fetus about seven months old. [It was desired to make an attempt to save the child by an operation just before the death of the mother, but the friends of the patient objected.] Confirming the diagnosis of obstruction to the lumen of the right subclavian artery, at its middle third, an aneurism was found which had been spontaneously cured by the formation of a clot which was supposed to have been deposited upon some material carried into the circulation from the seat of the vegetations.

The chief points of interest in this case, which is a typical one of acute ulcerative endocarditis, are: first, the shock of fright which brought to light symptoms of heart disease, which had before been latent; sec-

ond, the marked symptoms referable to the right kidney, which during life were attributed to emboli—a diagnosis corroborated post-mortem; finally, the healed aneurism of the right subclavian artery. The question whether the consolidation of the aneurism was due to coagulation having for its point of departure emboli derived from the diseased heart, was one which could not be determined. It is, however, one of considerable interest.

The case, although an isolated one, is of interest if only as demonstrating the well-marked features of an affection which, not many years ago, generally passed unrecognized.

MINOR UTERINE SURGERY.[1]

BY CHARLES P. NOBLE, M. D.,

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For several years the attention of gynecologists has been so largely occupied with abdominal surgery, and particularly with the diseases of the Fallopian tubes, that but little has been said concerning the diseases peculiar to the uterus. It may be supposed by some that the reason so little has been heard of the uterus and its diseases is that the labors of the past have placed our knowledge of these subjects upon an enduring basis. I am satisfied, however, that the true reason has been indicated above, and am the more convinced of it by the recent appearance of a paper absolutely denying the truth of the teachings of the past, concerning, more especially, the treatment of diseases of the uterus, and attributing evils to the measures employed greater than the good they have been designed to accomplish. In view of the immense strides which have been made in our appreciation of the diseases of women, especially those of an inflammatory character, in the last ten years, and of the very different light in which diseases of the uterus now appear as contrasted with former years, it has seemed to me that it will be profitable to review the subject at this time. The ground to be covered is so considerable that I shall present my views concisely and of necessity somewhat dogmatically, so as not to consume your time unduly. Presented in this way, I hope the subject will elicit full discussion, as I consider it one of the most important and suggestive in gynecology.

Before treating of the individual diseases of the uterus requiring surgery, it will be well to consider the diseases of the uterus as a whole. It cannot be too strongly insisted upon that a very sharp distinction should be made between diseases of the uterus themselves and diseases of the uterus complicating, or complicated by, diseases of the uterine appendages. This is the key to the situation, and upon a right appreciation of this fact depends success, or failure, or even disaster, in the management of this class of cases. Uncomplicated diseases of the uterus, barring neoplasms, seldom or never threaten life, and belong to the minor ailments of women. Where the uterine malady is complicated by inflammation of the uterine appendages, the conditions are essentially different. The disease of the appendages overshadows the disease of the uterus, which must be nearly or quite disregarded. For were it possible to cure the uterine malady without modifying the disease of the ovaries or Fallopian tubes, little would be accomplished, as the more serious disease would remain. But this is not all, for experience has amply shown that to tamper with the uterus, particularly by operation or by intra-uterine applications, in the presence of complicating tubo-ovarian inflammation, is a most dangerous thing, liable to set up acute pelvic or general peritonitis. Hence it should be laid down as a rule that operation upon or manipulation of the uterus is contra-indicated in all cases in which tubo-ovarian inflammation exists. The contra-indication becomes the more absolute the greater the gravity of the complicating disease of the appendages.

The experience of the past has shown the truth of the foregoing statements, and the knowledge of the present concerning the nature of pelvic inflammation has rendered the whole subject easy of comprehension. Formerly, various explanations were offered, some of them quite fantastic, as to the occurrence of pelvic inflammation following manipulation of or operation upon the uterus when "fixed," or in the presence of "cellulitis," or of "thickening." Now we know it is due to the rupture of intra-peritoneal adhesions and the escape of septic material from the diseased appendages.

The Uterine Sound.—I have but little to say in commendation of the uterine sound. Un-

[1] Reprinted from report of a meeting of the Philadelphia Obstetrical Society, December 4, 1890, in the *Annals of Gynecology*, January, 1891.

questionably, it does far more harm than good as used to-day. I believe that its field of usefulness is very limited. For the purposes for which the sound is ordinarily used, it is an unnecessary instrument. Bimanual examination teaches the size, shape, position and mobility of the uterus far more accurately than the sound, and without injury to the patient. The text-books say that the use of the sound should be preceded by bimanual examination to determine the above questions and the presence or absence of pelvic inflammation. If this be so, and the facts be determined, what is to be gained by the use of the sound? More or less uterine colic, and perhaps an acute salpingitis, when a dirty sound has been passed into a healthy uterus, or a clean sound passed with some force into a uterus in the presence of tubal inflammation. Unquestionably, the use of the sound has no place in the determination of the foregoing facts concerning the uterus. Likewise, I would condemn the use of the sound as a uterine resopitor. Mobile uteri can be reposited by Schultze's method, and fixed uteri should be let alone. The sound is useful in determining the patency of the uterine canal when this is in doubt; and may be useful in the differential diagnosis of obscure morbid conditions in the pelvis, but I am convinced that the facts apparently determined by its use are often illusory, and that the practitioner who least relies upon it will make fewest mistakes in diagnosis. The sound may be used to determine the presence of fungosities within the uterus; but the history of uterine hemorrhages and leucorrhœa, with the absence of disease outside the uterus, makes the diagnosis so certain as to obviate the necessity for its use. The diagnosis and cure can be made with the curette.

Intra-uterine Medication.—I feel convinced that intra-uterine medication has been much abused, and that the cases are extremely rare which require or are benefited by the application of a medicament within the internal *os uteri*. Intra-uterine applications have been recommended for chronic endometritis and chronic metritis. When uterine leucorrhœa established the diagnosis of endometritis, and the same, with enlargement and tenderness of the uterus, not due to subinvolution or neoplasms, established the diagnosis of chronic metritis, these diseases were said to be very common—indeed, the most frequent diseases of women. Hence intra-uterine medication became a routine practice. If I am to judge from my own experience, uncomplicated chronic endometritis and metritis are not frequently met with. As an illustration, by going over a hundred cases in my case book and selecting uncomplicated cases, I find seven. If the cases of laceration of the cervix, with erosion, etc., were added, the list would be considerably increased. But in by far the largest number of cases these morbi d conditions exist in relation with the inflammatory affections of the uterine appendages, preceding and causing the tubo-ovarian disease, and later being kept up by it.

In the presence of tubo-ovarian inflammation it is now generally accepted that intra-uterine applications should not be made. They can do no good, and may do great harm. Fungoid endometritis, and septic endometritis following incomplete abortion, require the curette. Excluding the foregoing, and cases of endometritis and metritis complicating laceration of the cervix, few cases remain for inter-uterine medication. And I am far from convinced that this small class cannot be more efficiently treated and more quickly cured by the dilatation of the cervix under anæsthesia with thorough curetting of the uterine canal with the sharp curette. During the past year I have thought it advisable to make applications to the whole uterine canal in three cases. One, a case of chronic endometritis in a virgin, was cured. The second, also a case of chronic endometritis in a woman the victim of syphilis years before, was improved by intra-uterine medication, and was cured when mercury and iodide of potassium were given by the mouth, in addition. The third, a case of small fibroid tumor, with menorrhagia, was made distinctly worse.

Looking back over my past results, I feel less and less inclined to make intra-uterine applications. Formerly I made applications of Churchill's tincture of iodine, and solutions of nitrate of silver to the endometrium almost daily. Before I appreciated the dangers of the practice and its contra-indications salpingitis and peritonitis were "lighted up" in a number of cases. Fortunately no deaths resulted. Since I have abandoned the routine use of intra-uterine medication in diseases of the pelvic organs accompanied by uterine leucorrhœa, my patients have been far happier (as uterine colic is only a memory), and I am satisfied that the influence of treatment has been more favorable than in former years.

Dilatation of the Cervix.—Dilatation of the cervix is advised for the cure of obstructive dysmenorrhœa and sterility due to flexions of the uterus (usually so-called congenital anteflexion), or to stenosis of the cervical canal, congenital or acquired; also as a step in the removal of polypi, small fibroid tumors and the retained products of pregnancy, and as a preliminary to the use of the curette. In selected cases I am heartily in accord with this advice. It is not possible to discuss these questions now; but the important thing is that cases of uterine disease are to be selected for dilatation, and not cases of tubo-ovarian inflammation. In such cases, when done with full antiseptic precautions, under anæsthesia, dilatation of the uterus is practically without danger, immediate or remote, and has given very satisfactory results in my hands.

The mistake of regarding cases of so-called acquired anteflexion, due to peritoneal adhesions or shortening of the utero-sacral ligaments, as cases of uterine disease is particularly to be guarded against. The folly of expecting to benefit inflammation of the peritoneum or of the uterine appendages by dilating the cervix is apparent; and I am convinced that all the disasters following dilation of the cervix are to be attributed either to this error in practice or to poor antisepsis.

Rapid dilatation with the steel dilators has always been employed, the pattern of Goodell having been commonly used. I have never seen a tent introduced into the cervical canal; nor have I seen the hard rubber dilator used.

The Curette.—The uterine curette is a most valuable instrument, and is indispensable in the treatment of uterine fungosities and for the removal of the endometrium in certain cases of menorrhagia. I believe it capable of rendering good service in the treatment of certain cases of congestive and obstructive dysmenorrhœa—in which the seat of pain is in the uterus, and the cause, morbid processes taking place therein—by removing the endometrium, particularly near the internal os. After incomplete miscarriages, and in septic puerperal endometritis, the curette is useful to remove necrotic tissue; but in these cases its use should be preceded by the finger, used as a curette, by which alone can the state of the uterine cavity be determined. In such cases the finger is the best curette. In all cases I precede the curetting with dilatation of the cervix, and follow it with the intra-uterine douche and intra-uterine iodoform gauze packing, which acts as a capillary drain.

In cases of chronic endometritis without complication dilatation and curetting will either effect a cure or greatly facilitate subsequent intra-uterine medication.

In curetting full antisepsis should be maintained, and the same care be used to select uncomplicated uterine cases. Anæsthesia is essential to thoroughness. The curettes of Martin and Schroeder have been used. The dull curette should be regarded more as an instrument of diagnosis. It is useful in cleaning the uterine cavity of débris before using the douche. It also finds a place in puerperal septic endometritis.

Laceration of the Cervix.—Probably no subject in gynecology has excited more discussion than that of the pathological importance and the treatment of laceration of the cervix. I am in accord with those who regard laceration of the cervix as a lesion of importance in the causation of pelvic disease, and the operation devised by Emmet for its repair as a useful addition to surgery. Certainly many lacerations of the cervix, occurring during labor, heal spontaneously during the lying-in, and are of no practical consequence to the puerpera; others heal more or less perfectly, and involution of the uterus taking place fully, no ill consequences follow. But the history of laceration of the cervix in many cases is very different. The laceration does not heal, the cervix gapes open, involution of the pelvic organs does not take place, pelvic congestion is kept up and uterine catarrh and menorrhagia follow. The general health is more or less affected, depending upon the vigor of the particular constitution, and the duration of the local disease. In some cases extensive reflexes are developed; but the conservative man will ever bear in mind the possibility of overlooking neurasthenia and hysteria in this class of cases.

Local and general treatment will effect a cure in many of these cases without operation. Rest, tonics, regulation of the bowels, ergot, hot water, vaginal douches, the application of glycerine tampons, painting the cervix with Churchill's tincture of iodine, together with scarification of the cervix, will frequently improve the condition so markedly as to effect, practically, a cure. But often this treatment proves ineffectual and operation is necessary. Another indication

for trachelorraphy is the existence of laceration of the cervix as a complication of retroversion or retroflexion of the uterus. Not infrequently the malposition cannot be corrected until the intra-vaginal cervix is restored by operation. It is important that endometritis, existing as a consequence or as a complication, should be cured before closing the laceration. Where this is difficult or impossible, and in all cases in which uterine hemorrhage is a feature, the trachelorraphy should be preceded by dilatation of the cervix and curetting of the uterus. Trachelorraphy done under these conditions has given very satisfactory results in my hands. When done for supposed reflex effects, due to cicatricial tissue, the outlook is not so promising.

It will be observed that the operation has been recommended only for uterine disease. When the uterine diseases exist in connection with inflammatory disease of the appendages the operation is contra-indicated. Under these circumstances, there is great danger of causing acute peritonitis; or this failing, drainage from the uterus is interfered with, and subsequent acute attacks of salpingitis promoted. In a neglect of this contra-indication lie most of the dangers and disappointments of trachelorraphy.

The relation of laceration of the cervix to tubal disease is a subject worthy of careful study. The laceration of the cervix is a frequent cause of subinvolution of the uterus and endometritis is generally believed. That endometritis causes salpingitis by extension is also true. Hence it appears probable that laceration of the cervix sustains an important relation to salpingitis as one of its predisposing causes. The relation between laceration of the cervix and cancer also is probably more than accidental. These considerations are further inducements to repair all lacerations of the cervix which are causing active symptoms.

I believe that trachelorraphy, done under the conditions laid down, is a perfectly safe, and very valuable, operation; and that the present tendency to decry its usefulness arises from a failure to observe its proper indications; or to carry out the principles laid down by its inventor for the operation itself. Of lateral and posterior incision of the cervix I shall say but little. I believe that the field of usefulness of these operations is limited, but that, in exceptional cases, they may be valuable.

I hope I have made it clear that my own experience has made me a firm believer in the value of minor uterine surgery for uterine disease. It seems equally clear to me that the cause of disappointment in the past, when it has been met, has been a failure to properly study the cases; and thus uterine surgery has been employed for other than uterine disease. Also that the disasters of uterine surgery have been due to inefficient antisepsis, or to the fact that operation has been done in the presence of disease of the uterine appendages, more especially pyosalpinx and abscess of the ovary.

When it was believed that inflammation of the appendages was cellulitis, which was caused by, and kept up by, disease of the uterus, and only to be cured by curing the uterine malady, it was perfectly logical to attack the uterus with our therapeutic resources. But experience has shown the dangers as well as the futility of this method, and modern pathology has brushed away the apparently rational basis upon which it rested. It is upon this ground that I have opposed useless and dangerous uterine treatment in complicated cases of pelvic disease.

Society Reports.

PHILADELPHIA OBSTETRICAL SOCIETY.

Meeting, December 4, 1890.

After hearing Dr. Noble's paper on

Minor Uterine Surgery

(see p. 156),

Dr. Joseph Price said: I wish in the first place to thank Dr. Noble for the fortification of my paper which he has given in the first half of his paper. The last half of his paper seems in large measure a contradiction of the first. A short time ago, before the County Medical Society, I had the pleasure of calling the attention of the profession to the great mischief done by minor gynecological tinkering. Dr. Noble starts out by talking about the diseases of the uterus and the minor ailments of women. I want to repeat that none of us in our own homes consider any disease of the uterus as a minor ailment, or any deviation from health as a minor trouble. Again, in speaking of methods of treatment, he alludes to applications in the presence of cellulitis, that myth which has long since been brushed

away. Again, he alludes to fixed uteri and recommends that they be let alone. A fixed uterus rarely means simple uterine disease. As a rule it means a great deal more, but not many of us are willing to let fixed uteri alone and the patient suffering with the complications incident to this fixation with extensive tubal and ovarian disease. For instance, here is a pus tube six inches long which contained half a pint of pus removed from a case with fixed uterus. On the opposite side was an abscess of the ovary containing half a pint of pus. These are common conditions. Dr. Noble states that early in his experience he had three cases of salpingitis following tinkering, with one death. Many of these cases have resulted from the uterine medication and traumatism which a few years ago was so common. Dr. Engleman has recently read a paper of 154 or 158 pages before the American Gynecological Society on the hystero-neuroses, on which he dwells at length, and accuses the profession of forgetting the uterus and of disturbing the digestion and general health by overmedication. Such has not been my own experience. Through the West I have found they are prone to overtreat the uterus. This gynecological enthusiasm is largely due to the money that is in it. There is no doubt that in many cases it is the pecuniary consideration.

I picked up a piece of paper and noted from memory purely a large number of physicians who have asked me in the last six months to see patients suffering with advanced forms of tubal disease, due or not to, but following immediately the treatment that had been instituted. A physician living a couple of doors from me, Dr. Crandall, has asked me to see six cases which had to be relieved by abdominal section. They had had intra-uterine treatment, electricity, dilatation of the cervix and the like. Dr. John T. Hampton asked me to see three patients that had been treated by a number of men. They had huge pus tubes, and the specimens I have presented to this society. Dr. Logan, of Scranton, brings two cases following closure of the cervix by a distinguished operator; they presented huge abscess. In one of Dr. Hampton's cases I had to remove the appendix in addition to a large abscess and pus tubes. While in Cincinnati three years ago I saw with Dr. Ricketts a woman with the pelvis full and huge pus tubes following intra-uterine treatment. On my way home, I operated on a few similar cases in Youngstown and in Warren, Ohio, all following intra-uterine treatment. Dr. Murfree, of Murfree's Borough, Tennessee, sent to Dr. Eagleton a patient who had been eight years under treatment. She was seen by two gentlemen and both insisted upon section. These are simply typical cases, and I could give many others. I am sorry that Dr. Duer is not here. Eight years ago I sent a patient from the Philadelphia Dispensary to the Presbyterian Hospital to have the cervix closed. I am satisfied that she was free from ovarian and tubal disease. I had myself twice attended her in confinement. Five years later I had to do a section on her for double tubal disease. Dr. DaCosta, in a recent discussion of this subject, calls attention to some of the difficulties following the cervical operation, and in one or two of his cases he had a hard fight to save the patient's life. In the patient of the lamented Dr. Bruen (and it was in watching this friend that he got his pneumonia), I did a section for universal adhesions of everything in the pelvis and everything that could get into the pelvis. This was done six months after a cervical operation. This was only one of four cases following closure of the cervix by the same operator. I have done over thirty sections in one town alone in Ohio for trouble following intra-uterine medication and treatment. Some of these patients I examined two years ago.

On Friday, two weeks ago, I removed the pus tubes which I now show you. Some of these patients have persisted with treatment notwithstanding that I told them two years ago that nothing short of a section and removal of the offending organs would afford relief. I have no longing for such neglected and delayed cases. I have had half a dozen cases from West Chester where the cervix had been closed or dilated. I operated in August on a lady, the wife of a prominent physician in the South. The cervix had been closed a few months before. I operated to save life. Dr. McMurtry, of Danville, tells me that he has had a number of sections of that character. I remember some years ago picking a little woman out of the Midnight Mission and turning her over to one of my pupils for a cervix operation. Three months later he asked me to see her with an angry pelvic inflammation and a huge abscess of the left ovary. He adopted that imperfect method of stitching the sac to the abdominal wall, notwithstanding that I opposed it. The woman died in the Pennsylvania Hos-

pital some months later with the drainage-tube still in. Dr. Norton has presented the specimens here. I was asked some months ago by a physician now present to see a patient with some pelvic trouble following application or dilatation. I insisted upon prompt section. The physician returned with instruments for that purpose, but met with some opposition from the old family physician, which continued for four or five days. The operator then resigned all claim to the patient. I did not see the patient again. I might say here, that once upon a time a man saw the same woman with pelvic trouble and suggested that they wait for a rigor. They waited some three days and the rigor came. He then insisted on an abdominal section and the woman died upon the table. This was nine days after I had urged the section. Dr. Montgomery will remember a young woman, an exceedingly distressing case. She had had every passage, with the exception of the mouth and nose, dilated and cut for a period lasting something over a year, not under Dr. Montgomery's care, however. The urethra had been dilated five times and the cervix many times. She had had many attacks of peritonitis, and some of what were called typhoid fever. She had been treated for cystitis. I found large pus tubes which had followed this treatment. A lady on Darby Road had been treated by twelve physicians. Finally one of them closed the cervix and an abscess followed. This was opened from the bowel. She continued to suffer and demanded an operation at my hands. I made an extensive dissection and resection, and she had the first and only fecal fistula that I ever had follow an abdominal section. This finally closed and she is now perfectly well.

I took a glance at the transactions of the Philadelphia Obstetrical Society and I find four or more deaths reported following the use of tents. Drs. Hodge, Wilson, Willard and Richardson each reported one. Last summer I was called to Trenton to do a section on two women dying with peritonitis. Both had had dilatation or uterine treatment. Some of you will remember a patient of Dr. Daland's, on Pine street, some years ago. Both Dr. Pepper and Dr. Elwood Wilson saw the case. For eleven days she was watched with peritonitis and intestinal obstruction and I was asked on the eleventh day to do a section. The bowel was gangrenous and presented miliary cracks. The trouble followed dilatation. There had been no trouble prior to the dilatation. The operation was done to favor conception. Her sister has since had a section for double pus tubes and ovarian abscess also following cervical and intra-uterine treatment.

One of my assistants took a case out of the Philadelphia Dispensary during my absence and closed the cervix. On my return I found her with an angry peritonitis and huge acute pus tubes. I operated successfully to save her life fourteen days after the cervical operation.

If there were time I could make two or three quotations from Dr. Goodell. You have all read them, and it is scarcely worth while to repeat them. In one of his articles (*Gyn. Transactions*, Vol. iii, pp. 28–31), he says: "Take for instance this too common picture from life. A girl who enters puberty in blooming health." . . . "The treatment goes on and she settles down to a sofa in a darkened room and lapses into habitual invalidism." (See *Transactions of College of Physicians*, Third Series, Vol. xi, 1889, p. 265.) I could give numerous other references from this one author alone, but I have said enough to demonstrate the great mischief done, demanding the promptest treatment possible to save some lives otherwise doomed to be lost. Close analysis by the light of scientific work at the operating table and study of records should be quite sufficient to guide honest, scientific workers, with an honorable motive. I cannot refrain, in closing, from giving a quotation from Sir John Tilt. He says: "America with accustomed audacity . . . . What matters if the cervix does give way with an audible snap, the woman is under ether."

Dr. Daniel Longaker said: It seems to me that if all the cases referred to by the last speaker had come under his observation before the serious symptoms had developed, his position would be distinctly stronger. As it is, however, but few of the cases were seen by him before interference was demanded, and there is, therefore, a certain element of doubt. The only force that the argument has is that the cases were improperly selected—a plea which the author of the paper had already made. I am fully in accord with the reader of the paper. In regard to my own experience with the sound, it has been a matter of great surprise that, in my earlier years, I did not do more harm with it than I did. Once I felt the point of the sound near the umbilicus, but the patient never had a symptom following the

accident. My sound was broken some four or five years ago and I have never bought another.

Some criticism was made on what the reader said in regard to fixed uteri. I think that the author's idea comes in there by implication; *i. e.*, the uterus *per se* is to be left alone and the diseased appendages are to receive attention.

Dr. E. E. Montgomery said: I was impressed with the paper as being an exceedingly conservative one. In many points I am fully in accord with the views expressed. I am not willing to object to intra-uterine treatment to the same degree as Dr. Noble. I am not willing to concede that the cases which have been mentioned by Dr. Price have been necessarily due to improper use of intra-uterine treatment. I am inclined to think that the views of Dr. Price have been largely influenced by the class of cases which he has been called upon to see in the last few years: cases which have been referred to him, and where he has had more to do with the abdominal work than with the other conditions. The extreme views which he holds in regard to this matter have a good influence upon the profession, however, in preventing undue intra-uterine treatment, and the abuse of measures that in many cases are of extreme value. There are some cases which cannot be so quickly relieved by any measures as by careful and judicious intra-uterine treatment. In many cases of uterine catarrh, particularly of the cervix, as we often find complicating laceration, where we find the cervix with a plug of viscid mucus sometimes discolored with pus, blood, etc., in such cases careful cleansing with the use of the curette, applied to the whole cervical canal, and the subsequent application of astringents, or tincture of iodine, or carbolic acid, will relieve the patient very quickly.

It is true that the operation for laceration of the cervix has been greatly abused. I have, like Dr. Price, had to operate on a patient for the removal of the ovaries one or two years, and even three years subsequent to the performance of the operation for laceration of the cervix.

Many of the cases of fixation of the uterus are not necessarily cases to be left alone or treated by abdominal incision. There are cases where the fixation is the result of adhesive peritoneal inflammation as the result of exposure to cold during a menstrual period. In these cases there is not necessarily chronic tubal or ovarian trouble sufficient to require their removal. The reflex neuroses which arise are more the result of the disturbance of the circulation. Such patients subjected to the treatment of Schultze, by manipulation with two fingers in the rectum and one hand over the uterus, have been relieved from distressing symptoms, for which it had been necessary to use morphia. These, however, are special cases. They are to be carefully selected, and we necessarily must treat them as carefully and judiciously before and after the procedure as if the abdomen had been opened. In cases where there is the possibility of pus about the tube or ovary such treatment is objectionable and dangerous.

In regard to the dilatation of the uterus, I wish to call attention to the method suggested to the profession at the International Medical Congress held in Washington, in 1887, by Professor Vulliet. The method suggested was by the introduction of iodoform, or other antiseptic gauze. I have employed this method in a number of cases with valuable results. It may be necessary to reapply the gauze three or four times. By this method the cavity of the uterus can even be explored with the eye. Even this plan of treatment should be used with the greatest caution. The patient should be kept quietly in bed during the treatment. I prefer this method to the mechanical means of dilatation. I believe that there is less danger of injuring the mucous membrane and the tissues of the organ, which must necessarily be bruised and lacerated by mechanical dilatation sufficient to accomplish the purposes usually desired.

Dr. William Goodell said: I listened to the paper with pleasure, for it pleases me to hear so conservative a paper from so young a member of this society. I agree with him almost wholly in every respect. I rarely employ the sound, but I cannot wholly give it up. I think that it is of service in certain cases, for instance, to decide the question of fixation of the womb when the adhesions are slight.

In the past few years I have changed my whole practice in regard to intra-uterine medication. It is now rare for me to swab the endometrium, for I have learned that many of the diseases of the womb cannot be cured by such application, and there is a certain amount of danger attending their use. Leucorrhœa is a symptom which is often not controlled by the most heroic

intra-uterine applications. Like a chronic nasal catarrh it may not do much mischief, and it is often a symptom of nerve prostration. I have, therefore, ceased attempting to cure it by merely local means.

I look upon the curette as a valuable instrument, and should hate to give it up. I have seen no mischief resulting from its use since the introduction of the antiseptic methods. Indeed, in recent years it is rare to see any bad results following any kind of minor surgery.

I am not prepared to go to the extent that Dr. Price has done. If he had said that too many manipulations are made, and that too many surgical operations are done, I should go hand and glove with him. I am sure that the womb is an over-treated organ. I believe that in many cases, perhaps, indeed, in the majority of cases, the womb is treated when it is not the cause of the disease. At the same time I am not prepared to accept the statement that the profession does this for gain; while, of course, a black sheep turns up here and there, I do not believe that the majority of the profession make these applications simply for the money that is in it. They do it through ignorance, and because the womb has been made the scapegoat for almost all of the diseases of women. Again, the physicians are in a measure forced to treat the womb because the women themselves attribute nearly all their ailments to this organ. I think that a good deal of minor gynecology is done by men who should not attempt it, and many of the bad results are due, not to the operations, but to the operators. I am not willing to accept the cases brought forward by Dr. Price, for it is quite probable that in some of them pus tubes were present which were not recognized at the time of the operation.

I have done so much good with the uterine dilator that I should dislike to give it up. There is nothing equal to it for the relief of dysmenorrhœa, or of sterility. I have had over 400 cases of dilatation, and have not seen any serious results, especially since the introduction of antiseptic surgery. Dr. Price has quoted from Tilt in regard to my hearing the cervix snap. I grant that this was rather an extravagant statement, made when I was younger and more enthusiastic. Yet I have repeatedly heard sounds like the parting of muscular fibers, but with only good results, from the operation of cervical dilatation.

Dr. Price has misunderstood a quotation which he has made from my *Lessons in Gynecology* about a young girl going from one physician's office to another's, who is finally doomed to hopeless invalidism. She is doomed—not because the physicians made applications to her womb, but because they did not understand the cause of her trouble, which lay in the nervous system, and not in the uterus. Here lies the great mistake of the modern school of medicine. The womb is brought so prominently into view as a cause for disease that every other organ is overlooked.

In regard to cervical tears, I am sure that we should operate on them. That they are over-operated on I am willing to acknowledge. Yet in selected cases great benefit accrues from this operation. I am satisfied that uterine cancers come, in the great majority of cases, from uterine tears. I do not think that I have seen half a dozen cases of cervical cancers in women who have not borne children. This, in itself, is a strong argument in favor of the operation. Again, out of the hundreds of cases operated on by myself, not one was ever attacked by cervical cancer. Further, grave constitutional symptoms, even threatened insanity, have in my hands disappeared after operations on cervical tears. But one must not promise too much from this operation, else one will disappoint one's patients. I am, however, quite skeptical about the evil effects of the cicatricial tissue sometimes seen in self-healed tears. In my experience, the symptoms attributed to the cicatrix are nerve-symptoms, and are to be cured by treatment directed to the nervous system. There is another advantage accruing from this operation, viz., that retroversion is sometimes cured by it. I have repeatedly seen this good result happen.

There is one statement made by Dr. Noble which I should like to take exception to. That is in regard to the use of the curette for the removal of portions of the placenta and membranes left behind in miscarriages. In my opinion, this is a mistake. Yesterday I had at my clinic a woman who had a miscarriage three months ago, and since then has had continuous oozing, occasionally amounting to free bleeding. I said to the class that evidently some placental tissue was retained and had a vital attachment to the womb; but that I would show them, practically, that the curette was not the instrument to use, for it would merely dislodge the placenta without removing it, and large

uterine sinuses would then be uncorked, as it were, by it, causing a serious hemorrhage. Sure enough; as soon as I had begun to use it so large a stream of blood poured out that I had to thrust my finger into the canal to plug it up. I then made haste to use the instrument par excellence for this purpose—a fenestrated polypus forceps—and in less than a minute removed a placental fragment as large as the first joint of my thumb. The curette is useful for the removal of fungoid vegetations of the endometrium and for villous exaggerations occurring at the placental site, but not for bulkier bodies.

As I have already said, I was much pleased with the paper, and I was also with the remarks of Dr. Price. He is doing good to the profession and to all of us by calling attention to remote results of uterine treatment. At the same time, I cannot go with him so far as to attribute all the cases he has brought forward this evening to the use of the curette, intra-uterine medication and dilatation.

Dr. John C. DaCosta said: Dr. Goodell has expressed so clearly what I feel on this subject that but few words are necessary.

First, in regard to the sound. I have examined a great many women and have often used the sound, oftener in past years than recently, and am not conscious of having done mischief with it. There are certain uterine conditions that you cannot diagnose accurately without the use of the sound. By palpation you can explore the exterior of the uterus and usually determine whether or not it is adherent. Take, however, a womb like this sketch, apparently normal in shape. But the patient is bleeding and you want to know the cause. The womb may be a little enlarged; but yet we see large wombs that do not bleed and are not diseased. The cervical canal may appear to be healthy. There is something inside that womb, but bimanual palpation will not tell you what it is. Introducing the sound, you will find that instead of passing normally, the instrument meets with obstruction. This cannot be discovered by bimanual palpation. You use your sound and find a fibroid bulging in the anterior or posterior wall. Here is a case that needs treatment, and you cannot treat the patient without getting inside the uterus. To be sure, you can (as has been suggested) remove the tubes and ovaries, but a woman does not want the tubes and ovaries removed when she can be cured by other measures, and you do not want to do it.

I have expressed my views in regard to the curette in the discussion of the paper of Dr. Price on "Major Pelvic Troubles due to Minor Gynecology." I should be loth to do without the curette. In using the curette a man should know his work. Many of the troubles referred are due to men undertaking work that they are not fitted for. There is probably nothing that requires more careful training than minor gynecological practice with, perhaps, the exception of abdominal surgery, and that major troubles may follow minor gynecology is due probably to the fact that men attempt minor gynecology who do not understand it. In cases coming to the clinics and handled by unskilled men without due regard to the conditions present, there may be unnecessary operations performed, and operations may be performed where there is unrecognized tubal or ovarian disease. Not so, however, when men know their business, and are experienced in the treatment of cases.

I cannot accept all of Dr. Price's cases. He mentions a remark of mine, that "I had to fight for the life of a woman after an operation on a lacerated cervix." Well, so I did, and won the fight, and she has been a well woman ever since. That was before the day of aseptic surgery, and I am not satisfied that the trouble did not originate from sepsis. In operations on the torn cervix I have often found, as Dr. Goodell has stated, that the flexion that is present has been relieved. This was markedly shown in a case operated on by me last week. Before the operation there was a very sharp flexion; after it, the uterine canal was normal in shape.

Some seven or eight years ago, in the discussion of a paper of mine on laceration of the cervix, Dr. Goodell stated that it was rare to find cancer of the cervix except in cases with a tear of the cervix. Since that I have borne this point in mind, and have not since then seen a case of cancer of the cervix where there had not been a tear. Many tears do not require operation; they will get well by rest and attention to the general condition. Others will not, and operation is the remedy to cure and prevent danger in the future.

I have used sponge tents frequently, both the ordinary sponge tents and those with watch springs in them. Dr. Ellerslie Wallace told me that he had lost a case from the use of sponge tents and told me the reasons, and bearing in mind the reasons, and avoid-

ing means that would cause danger, there has been no trouble with them. Sponge tents are like a surgical instrument—you must know when and how to use them, and to get results must know how to make them and must make them yourself. The ordinary sponge tents as sold in the shops are useless and even dangerous.

The dilator is too good an instrument to be lightly given up, and, like any other surgical instrument, while achieving grand results in able hands, it is a dangerous tool in careless or unskilled hands. Choose your cases for it, and you will never regret using it. But remember also, that every bent womb does not need a dilator.

As to the money influence that Dr. Price alluded to, I should be sorry to think that the members of the profession are influenced by the pecuniary consideration. I could tell some touching tales about the money influence on the other side in patients who have at times come under my own care.

I do not think that the mortality of minor gynecology is as great as Dr. Price has led us to believe. It is certainly, so far as I have been able to ascertain, nothing like the mortality from unwarranted abdominal surgery. Probably a good deal of the difference in ideas is due to a difference in the class of patients.

Dr. C. P. Noble, in closing the discussion, said: I am glad that this paper elicited such a full discussion, and that in general the criticism has been so kindly; but some of the speakers have misunderstood me. It might be inferred, from what Dr. Price has said, that I believe chronic cellulitis to be a frequent pelvic condition. The terms cellulitis, fixed uteri, and the like, are in quotation marks in the paper. The whole tone of the paper shows that I do not regard cellulitis as a common condition.

What I would say in reply to Dr. Price has been so well covered in the discussion by other speakers that it is not necessary for me to say anything. It is probable that in many of the cases reported by Dr. Price the tubal or ovarian disease was present prior to the minor operation or treatment employed; and in order that these cases should have a bearing upon the argument, an exact diagnosis should have been made before treatment was begun. These cases come under the category which I referred to in the paper as cases in which minor uterine surgery is not indicated. Again, women who have been subjected to minor uterine surgery are liable to suffer, later, from gonorrhœa or other causes of salpingitis. This fact doubtless accounts for some of the cases reported by Dr. Price.

In regard to what I said about fixed uteri being left alone, the context clearly shows what is meant. The idea is that the sound should not be used for repositing the fixed uterus. This class of cases are really not uterine. I agree with Dr. Montgomery that in rare instances, when the adhesions are light and the Fallopian tubes are comparatively healthy, the uterus can be freed by careful treatment; but, in general, fixed uteri are fixed because of tubal and ovarian disease, with peritonitis. In the cases referred to by Dr. Price, the uterus was left alone and he removed the real source of trouble, the diseased tubes and ovaries.

I agree perfectly with Dr. Goodell with reference to the use of the curette in miscarriage. The curette is not the instrument for the removal of portions of the placenta. I prefer to give an anæsthetic and to use my index finger as dilator and curette. In no other way can it be known when the uterus is empty. The results have been so satisfactory that I have not had occasion to use any instrument. In most cases of incomplete miscarriage the pregnancy has advanced to or beyond the third month. When miscarriage takes place earlier, the ovum is usually thrown off *en masse*, or in the earliest weeks as detritus. Under these circumstances manual interference is seldom if ever required.

In the paper I said nothing about the use of the dilator or curette in the office. I think that this practice should be unqualifiedly condemned, because proper antisepsis cannot be employed under the circumstances, and because dilation and curetting cause too much pain to be done efficiently without an anæsthetic.

PERISCOPE.

Koch and the German Government.

The British Medical Journal of January 10, 1891, says editorially: During the last fortnight various rumors have been telegraphed from Berlin as to the arrangements made, or about to be made, between the German Government and Professor Koch with regard to the future production of his remedy for tuberculosis, and it must be ad-

mitted that these rumors have been of a somewhat disquieting character. It has been said that Dr. Koch, and each of his assistants, had accepted a large immediate payment, and that they were to receive a royalty upon all sales in the future. Thus stated, the arrangement, it must be admitted, would partake far too much of the commercial transaction to be agreeable to the traditions of the medical profession, or the customs of men of science. It is, however, easy to give an unfavorable complexion to a transaction really of an honorable nature by inverting the steps by which the final results have been obtained and so misrepresenting their character. It may be well to recall the circumstances under which the lymph has been discovered, and the position of Dr. Koch in relation to the German Government. Dr. Koch has been for many years the director of the Hygenic Laboratory in Berlin. This laboratory is a Government institution, maintained by the Educational Department of the German Government, and Dr. Koch, as its director, has been an officer of that department. All the earlier experiments for the discovery of the now famous lymph were conducted in Dr. Koch's own laboratory in the Hygenic Institute, and there the observations upon guinea-pigs and other animals, which emboldened Dr. Koch to proceed to inoculate human beings, were made. The laboratory, however, presented no facilities for making these investigations upon human beings, and Dr. Koch holds no official position with regard to any of the Berlin hospitals. He therefore found himself in a practical dilemma, inasmuch as if he were to make his experiments in a public hospital it was feared that the premature and eager discussion of incomplete observations and immature results might easily tend to interfere materially with the investigations and to produce evil results. Dr. Koch consequently hired a private house at his own expense, and obtained the assistance of two gentlemen with whom he had private acquaintance—Dr. Libbertz, an old schoolfellow, and Dr. Pfuhl, his own son-in-law. The lymph was prepared in considerable quantities in this private house by these two gentlemen under Dr. Koch's supervision, and the earliest injections in man were made in the private hospitals of Drs. Cornet and Levy. It soon became evident, however, that the interest, both among the general public and in the medical profession, was too keen to permit of the continuance of the investigation upon these lines; and Dr. Koch, acting on the advice, or perhaps it might be correct to say upon the instructions, of Herr von Gossler, the Minister of Education, published the now famous preliminary paper, and distributed the lymph to certain of the hospitals in Berlin. Meanwhile, the manufacture of the lymph was carried on in the private house by Dr. Koch and his two personal private assistants. Recently this arrangement has ceased; the house in which the lymph is manufactured has been taken over by the Educational Department of the German Government, and Drs. Pfuhl and Libbertz have become officers of that department. The Koch Institute, which the German Government are now erecting, will consist of two parts—a laboratory and a clinical department containing 150 beds. The clinical department will probably be under the direction of Professor Brieger. The observation and treatment of the patients received into it, it is hoped, will afford in the future opportunities for Dr. Koch to prosecute his studies with regard not only to tuberculous diseases, but to tetanus, diphtheria, and typhoid fever. In this way the inconvenience which has arisen from his having no clinical wards of his own will be avoided.

In the laboratory bacteriological investigations will be carried on, and at the earliest possible date the laboratory for the preparation of the anti-tuberculous liquid will be transferred to this department of the Koch Institute. The director of this bacteriological department has not yet been appointed, but the whole institute will be under the general direction of Dr. Koch, who will remain an officer of the Educational Department. It is probable that the German Government will offer to Dr. Koch some recognition of the great services he has rendered while acting as a German official, such as was voted to Jenner for his services in a cognate research, and more recently to Pasteur, in France. Large national awards have repeatedly been made to successful generals in Germany and in other countries, and it is felt that there is no reason why a man of science, who has worked for the relief of human suffering, should hesitate to accept a reward which the destroyers of men have never felt the least difficulty in receiving. As to the further rumor that Dr. Koch and his assistants may receive a payment as it were by results in the future, it may be hoped that this rumor

is unfounded. Anything like the sale of a secret or the paying of royalties on a remedy would be contrary to the Hippocratic tradition.

Cerebral Tumors.

Dr. P. C. Knapp, in the *Boston Medical and Surgical Journal,* January 8, 1891, says Oppenheim reports twenty-three cases of tumor in the cerebrum, with a careful analysis of the symptoms. Eighteen of these were gliomata or sarcomata, three were cancerous, one tubercle, and one gumma. Only striking cases in adults, however, are admitted to the hospital. In three cases a diagnosis of tumor was not made, and in three others it was at first doubtful. Oppenheim lays great stress on the importance of frequent examination of the eyes, even up to a short time before death, for choked disc may be a late symptom; he also distinguishes between choked disc and neuritis. The changes in the nerve are of the utmost importance in diagnosis, and are of very frequent occurrence. In nephritis, however, the ophthalmoscopic picture may be that of neuritis, the retina showing no changes. In such cases, where there is uræmia or cerebral hemorrhage, with a negative urine, the diagnosis may be very difficult. He holds that neuritis or choked disc is absent only in those cases where the intra-cranial pressure is only slightly increased. Next to changes in the optic nerve, stupor and somnolence are of great value in diagnosis. It is sometimes difficult to keep patients awake long enough to answer questions. Oppenheim then analyzes the cases to learn how far focal symptoms can be relied on for diagnosis. In twelve cases there were aphasic symptoms, in nine of which the left temporal or frontal lobe was involved. An exact focal diagnosis could not be made from the symptoms, however, as the seat of the growth did not correspond to the particular type of aphasia, and some of the tumors were in the basal ganglia. In two cases the tumor was in the right hemisphere, and in one of these the patient had become left-handed at the age of seventeen, which raises the interesting question as to the possibility of the transfer of the speech centre in youth. The same may be said of the value of motor symptoms in diagnosis. In a few cases the new growth affected the precise centre corresponding to the disturbance of motion, but in others the tumor proved more or less remote from the centre, or deep down near the basal ganglia. With the uncertainty that still obtains in regard to the localization of the sensory centres, it is obvious that sensory disturbances give no more exact information than motor. Local headache is an entirely untrustworthy indication of the position of a tumor, but localized tenderness on percussion has greater value. In four of these cases was a more or less accurate focal diagnosis possible, and operative interference could have been undertaken—about seventeen per cent. In view, however, of the uncertainty that still obtains in diagnosis, of the limited success that recorded operations thus far show, and of the small percentage of cases that can be operated on (it must be remembered that, in this paper, Oppenheim deals only with tumors of the cerebrum itself), he considers that operative interference has a very limited field.

Physiological Action of Thialdine.

Thialdine, obtained for the first time by Woehler and Liebig, in the form of large crystals, of aromatic odor, which volatilize at the ordinary temperature without decomposing, is but slightly soluble in water, dissolves rapidly in alcohol and acids. According to *Les Nouveaux Remèdes* for November 8, 1890, from experiments made with this substance the following conclusions were reached:

1. Thialdine is very poisonous in frogs in the dose of ⅓ grain for every one hundred and fifty grains body-weight, though much less poisonous in rabbits.

2. Its administration is followed in the frog by profound sleep, with loss of general and reflex sensibility, depressed sensibility of the motor nerves, while the muscular irritability remains intact. In the rabbit the anæsthesia is less intense, and interrupted by excitation.

3. Thialdine invariably causes slowing of the pulsations of the heart, which, nevertheless remain perfectly regular. It is only when given in very large doses, and then only immediately before death, that the pulsations of the heart become irregular.

4. When given in small doses, the slowing of the pulse is only transient. Injected in small doses in the excised heart, thialdine diminishes the number of pulsations, at first prolonging the diastole, after rendering the

contractions of the heart irregular and more rapid, and finally arresting the heart in diastole.

5. In large doses it slows at the outset cardiac contractions, and then leads to the arrest of the heart in diastole.

It would thus seem that carbo-thialdine and thialdine differ absolutely from each other as regards their physiological action. The first is an energetic tetanizer, and never produces irregularity of the heart, which it arrests in diastole. On the other hand, thialdine produces irregularity of the heart, which, in the majority of cases, it arrests in systole; finally, while carbo-thialdine produces no effect on rabbits, thialdine is poisonous in them, though to a less degree than in frogs.—*Therapeutic Gazette*, January, 1891.

Chloroform as an Antiseptic.

The *Lancet*, December 20, 1890, says, Salkowski has demonstrated as the results of his experiments that chloroform prevented fermentation and decomposition in milk and other fluids. M. Kirchner (*Zeitschr. für Hygiene*, viii, 1890, Heft 3) has also made some investigations in regard to this property of chloroform. He first showed that, when mixed with blood serum, no decomposition of the latter occurred, and then further showed the same action on milk, and also its purifying properties on waters known to be rich in bacteria, and. again, on pure cultures of pathogenic and non-pathogenic organisms. The method employed was as follows: Chloroform was added in excess to the fluid to be experimented on; the vessel in which it was contained was then hermetically sealed and thoroughly shaken. The various specimens were kept at different temperatures—namely, that of body or air, or in an ice chamber. The contents were tested after variable periods of time, lasting from hours to years, by means of plate cultivations. The results obtained were that chloroform has a powerful destructive action upon a great number of bacteria, but does not kill their spores. The bacilli of anthrax, cholera and enteric fever, as well as the staphylococcus aureus, were quickly destroyed by chloroform. The spores of the anthrax, and tetanus bacilli were not affected by the drug. In spite of its presence the spores developed into bacilli, which were then rapidly killed. Kirchner considers from these results that milk to which chloroform has been added can be preserved for a long period, although we cannot be sure that it is free from spores which will eventually develop. Kirchner recommends its use for the preservation of fluids containing albumin, and especially for sterilizing blood serum, the composition and coagulating power of which are not appreciably altered by its presence, and its use as a cultivating medium is not influenced. The mixed fluids are best preserved at the ordinary temperature of a room and not in an ice chamber. Kirchner further recommends chloroform water for the disinfection of wounds, and states that it is especially useful in gynecological and obstetric practice, and also for the disinfection of bed-pans, linen, etc., in epidemics of cholera and typhoid fever. He supports Salkowski's views as regards its favorable action on some intestinal affections, especially the diarrhœa of children. He also advises that it should be used in military campaigns for the purification of drinking water.

A Ready Inhaler.

In the *British Medical Journal*, November 22, 1890, Mr. Arthur H. Rideal gives the following description of a ready method of arranging what he says is a most effective inhaler. Take an ordinary funnel, and in it loosely pack some cotton-wool. On this sprinkle the medication (ol. eucalypti., etc.), and then tie a piece of gauze or muslin over the funnel to keep the wool in position. Invert the funnel over some hot water contained in a breakfast cup, or other vessel, according to the size of the funnel, and an inhaler is obtained which is equal, as regards its utility, to the most elaborate.

Detection of Bile Pigment in Urine.

The *American Journal of Pharmacy*, December, 1890, says that bile pigments may be detected in urine as follows. Slightly warm about a fluid drachm of the suspected urine, and add 5 to 10 drops of tincture of iodine, agitating after the addition of each drop. In the presence of bile pigments, a pretty olive-green coloration is produced. Excess of tincture of iodine will produce a dirty brown-red color. Normal urine at first decolorizes the iodine solution, then gives a red coloration, and on addition of an excess of iodine a dirty brown-red color.

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The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

KOCH'S METHOD.

The developments in regard to the Koch method for tuberculosis within the past two weeks have not been of a very striking character. The medical journals in different parts of the world continue to produce publications about it, some of which are of the usual non-committal sort, some are hopeful, while some claim that characteristic reactions and apparently reliable improvements have been brought about by its use. In Philadelphia there is nothing novel in the recent reports in regard to the remedy. Some of the patients at the Philadelphia Hospital (Almshouse) consented to be experimented upon with it, but we have not heard of the result. At the University Hospital experimentation is continued in a cautious manner. Dr. Musser, who has charge of the medical experimentation there, made a public address on Friday, January 23, and is reported as expressing considerable confidence in the value of the remedy, saying "It was valuable not only in reaching and relieving particular diseases, but opening a new path to medicine, showing how cures were wrought, and developing new methods of treatment." The University of Pennsylvania Commission reports its experience in the number of the *University Medical Magazine* for February, but there is nothing special in it. The Johns Hopkins report in the *Bulletin* of the Hospital, January, 1891 (just issued), gives no new ground for confidence in the diagnostic or therapeutic value of the "lymph."

It is with some regret that we notice that under various titles, institutes have been started in New York City, which advertise that they are what might be called "Koch Institutes" or Sanitariums. One of these has connected with it the names of Dr. George F. Shrady, editor of the New York *Medical Record*, Dr. H. P. Loomis and Dr. W. C. Wendt, who advertise that a limited number of patients can receive the Koch treatment at a private sanitarium in New York. It is rather hard to reconcile the participation of Dr. Shrady in this enterprise with some of the editorials which he has published on this subject—although the first number of the *Medical Record* in which we notice this advertisement, contains rather glowing accounts of the experience by Dr. Wendt and Dr. Shrady in the use of the Koch remedy—or to understand the scientific or ethical basis upon which an institution advertising to treat patients by an exclusive method can rest. We had hoped that it would be impossible, even in New York, to have institutions of this kind organized, except by persons well known to the profession, as inclining to this way of securing notoriety, and we hope the example set by the men named above will not find imitators elsewhere.

The news from Berlin, under date of February 1, was that Professor Koch, who was about to start for Egypt, had given a fare-

well reception to his laboratory assistants that day. In this he said that he would probably be absent from Berlin about three months. He explained that he only partially disclosed the method of the production of the curative lymph, because he desired to stop the rush of doctors to Berlin (!). If he had described the method of manufacture more fully, he says, he would have been more worried about the details. The Berlin report stated that great discontent prevailed among medical men regarding the published accounts of the method of manufacture of the lymph. They had made numberless attempts to produce the lymph, but they find Koch's description totally inadequate to enable them to make it.

SECRET REMEDIES.—KOCH'S REMEDY.

The *Medical Press and Circular*, of London, in its issue for January 14, discusses editorially the curious state of medical ethics into which the use of Koch's then entirely secret and now only partially explained remedy has plunged the world. The tolerance shown to Koch in his secrecy and to those who used and exploited his so-called remedy, is contrasted with the principles which have been supposed to govern the medical profession. "The fact," our contemporary says, "is, matters are getting critical. The censors of the Royal Colleges of Physicians are fidgetting in their curule chairs, having been made uncomfortable by the feeling that it is due to the dignity of the bodies of whose honor they are *pro tem.* the custodians, and to consistency, to condemn, and, by condemning, to prohibit, further experiments with a remedy which is not only secret but dangerous—not only dangerous but, so far as our knowledge goes, therapeutically indifferent. Why, indeed, do the censors stay their hands? Is it because their correction would fall upon some of the best known and nosiest of the tribe of influential self-advertisers? These modern Jupiters apparently reserve their thunderbolts for little people, and at most mildly expostulate when the sinners are men occupying a position well in view in the medical world. These, however, are democratic times, and if the censors fail to enforce the rules of professional etiquette on this occasion they may as well retire into private life. Humbler men, encouraged by the latitude accorded to their seniors in the professional hierarchy will raise their drooping heads and set salutary discipline at defiance. The policy seems to be to postpone action until the 'boom' is over and the agitation has died a natural death. This may be politic, but it is not justice or equality. In face of the evident determination of the Germans to keep the secret of Koch's discovery, it behooves us to set our faces against any further meddling with a fluid of doubtful value and certain danger. The medical journals ought to speak out in no uncertain tones before the evil, already great, becomes a positive scandal."

The REPORTER has spoken out, at the very first announcement, and consistently ever since. If its example had been followed by all the other medical journals, the most famous bacteriologist of our times would perhaps have had courage to resist the strong and unprincipled pressure of the German Cultus-Minister, von Gossler, to do for national pride what is opposed to professional principle.

THE MICRO-ORGANISM OF MALARIA.

When, in 1884, Laveran published his treatise on *Paludal Fevers*, and announced his discovery of certain peculiar parasites (plasmodia) of infusorial order in the blood of patients in intermittent fever, his announcement was at first received with indifference and scepticism. Microbiologists were just losing all faith in the etiological relation to malaria of the bacillus discovered four years before by Klebs and Tommasi-Crudeli, although the discovery of these investigators at first awakened great confidence and enthusiasm. It is not our present purpose to give a history of the researches of

these last named experimenters, or to state the reasons why the claims which they so confidently made have been rejected by all competent authorities, as the whole case has been well stated by Sternberg in his treatise on *Malaria and Malarial Diseases*, by Councilman, Osler, James and others in this country.

On the other hand, during the past six years evidence has been accumulating, from all parts of the world, confirmatory of the results obtained by Laveran, and there is largely the same kind of evidence that the plasmodium discovered by him, in 1880, is the infectious agent of intermittent fever, as there is that Koch's bacillus is the cause of tuberculosis. We can only mention here among those who have made careful researches in this direction and have arrived at conclusions, in the main, substantiating Laveran's claim, the names of Marchiafava and Celli, Councilman, Osler, Sternberg and James, Straus, Bouchard, Golgi, Dockmann, Richard, Chassin, Mariotti, Ciarocchi, Vandyke Carter and Metschnikoff.

One thing seems to have been settled, malaria is not a bacterial disease. The most of the infectious diseases whose living agents have thus far been discovered are due to vegetable parasites of the order of fungi; the pathological processes engendered by bacteria are akin to the ravages of the mold, the rot, the mildew. The micro-organism of malaria is of the order of protozoa, and resembles the amœba. In the words of James, there takes place in the blood of persons suffering from malarious disease a series of phenomena not yet found under any other conditions—these phenomena point to the presence of an animal parasite. The appearances which are obtained are the following:

1. Colorless protoplasmic bodies inside the red blood corpuscles. They vary in size from one-fifth to almost the whole diameter of the corpuscle. They exhibit active amœboid movements. Some contain scattered granules of brownish-black pigment; others are unpigmented. The red corpuscle which contains the amœboid body gradually becomes pale by the loss of its hæmoglobin, which is converted by the parasite into the pigment granules above mentioned.

2. Disk-shaped bodies of colorless protoplasm, which are motionless. These are believed to be the plasmodia above mentioned, which have destroyed (eaten up) the blood corpuscle, and have entered on the cyst stage. They contain pigment granules.

3. Forms similar to the cysts in which the pigment granules have become massed at the centre, while the protoplasm is undergoing segmentation.

4. The small masses of protoplasm that have resulted from segmentation of the cyst-form. They are apparently ready to enter upon active work.

5. Certain hyaline crescentic bodies, which Laveran regards as a part of blood corpuscles which have been invaded and partly destroyed by the parasites. They have pigment granules in their centre.

6. Certain flagellated bodies. These are round, pear-shaped bodies about one-half the diameter of a blood corpuscle containing pigment granules and provided with from one to four flagella, which have an active slashing motion. By means of these flagella, the organism moves about in the blood plasma.

7. Free flagella. These have become detached from their bodies, and seem to be capable of leading an independent existence. This flagellum, which has been seen by numerous observers, and which is only a part of the real parasite, has been identified by some authorities with the *bacillus malariæ* of Klebs and Crudeli.

All attempts to cultivate these parasites (hematozoa) outside of the body have failed, nor can malarial disease be induced in the lower animals (though it has been in man) by injecting into the veins blood charged with these micro-organisms.

According to Golgi, the relationship be-

tween the cyclical evolution of the hematozoa (called by him *sporozoa*) and the mode of sucession of the paroxysms (ague fits) is subject to the same vigorous laws which we know governs the disease with which these micro-organisms are associated. In quartan ague, there are exactly three days between the invasion of the red globules by the parasites and the segmentation which the latter undergo to form the young elements destined to a new invasion of the red globules; in tertian fever, the cycle is two days. These differences of evolution correspond to differences in the nature of the parasites; for there are two distinct species of sporozoa, distinguished by their morphological and biological characteristics. The parasites of tertian fever have much quicker amœboid movements than those of quartan. They decompose hemoglobin much more rapidly and more completely; they disintegrate the red corpuscles, while the parasites of quartan fever only cause them to atrophy.

There has been much interesting discussion respecting the divers forms manifested by this polymorphic parasite, and their relation to the various phases of malaria. Thus many authorities believe that the crescents and the bodies allied to them belong to chronic cases, usually to those associated with malarial cachexia. In James's cases, the amœboid forms, pigmented and unpigmented, as also the flagellated forms, were peculiar to the acute stages of the disease.

As for the agencies which destroy the hematozoa — as might have been expected, sulphate of quinine is the most effective parasiticide. The effect of this remedy in arresting all amœboid movements when added to infected blood on the microscopic slide, and in causing the disappearance from living blood of the micro-organisms when the quinine is given in sufficient doses internally, is most marked. But apart from remedial agents, the leucocytes maintain a constant and often successful struggle with the invading foe, and Dr. Vandyke Carter, in a recent communication, graphically describes what he has witnessed in malarial blood — the war between the micro-organisms of malaria and the leucocytes. He has noticed that the crescentic bodies are not so attractive to the leucocyte as the flagellated; for the leucocyte will turn from the former, leaving them untouched, and prey upon the latter. In the fierce combat between the leucocytes and the flagellated spheroids the leucocytes seem often to triumph in the complete overthrow of their adversaries.

The micro-organisms above described resemble much certain flagellated organisms found by Danilewski in the blood of frogs, turtles, lizards and birds. As for their constancy in malarial blood, Laveran has found them in 432 cases out of 480 which he has studied from this point of view, and he thinks the negative cases explicable by unseasonableness or incomplete methods of examination; in a few the blood was examined when the patient was under the influence of quinine. Councilman states that he has noted the presence of hematozoa in all the cases of paludal fever which he has examined, and he has never found them in healthy subjects, or in persons affected with other diseases.

Laveran has sought for the parasite of malaria in the water and soil of infected localities. He reports the discovery of free flagella presenting almost the same aspect and dimensions as those found in malarial blood, and animated by the same movements; also of spherical flagellated bodies similar to those above described. Of course (as Hallopeau remarks) they cannot be considered *identical* until paroxysms of genuine intermittent shall have been produced by inoculating the blood of human beings with these infusoria of the marshes.

As stated in the Reporter, January 3, page 28, Danilewsky has recently stated that he has seen venti malaria in birds, with the characteristic parasite, and believes that this establishes the identity of the disease in them and in human beings. This curious and important subject is still being studied

by a number of able investigators and the facts in regard to it are accumulating in a manner to justify the hope that the doctrines in regard to it may before long be clearly understood and precisely formulated.

CLINICAL LECTURES.

In the preparation of Clinical Lectures for the REPORTER, it has been the rule that nothing should be printed which had not been revised by the lecturer, in manuscript or in proof, and approved for publication. In this way we have been able to present to our readers a series of very valuable and authoritative communications from some of the most able teachers in the country. Accidents will happen, however, and in consequence of the mislaying of proof-sheets, a lecture delivered by Dr. J. H. Musser, and published in the REPORTER for January 24, did not contain the corrections which he wished to have made in it, and any inaccuracies which it contains are, of course, not to be attributed to him. We publish under the head of Correspondence a note from him on this subject—in justice to him; in justice to the REPORTER we may add that the accident which has happened was not due to the omission of any of the precautions customary in the editorial office of this journal.

BOOK REVIEWS.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the REPORTER.]

STRICTURE OF THE RECTUM. A STUDY OF NINETY-SIX CASES. By CHAS. B. KELSEY, M. D., Professor of Diseases of the Rectum at the New York Post-Graduate School and Hospital, etc. 8vo, pp 46. (To be had of the Author.)

Dr. Kelsey gives, in this brochure, an instructive essay on stricture of the rectum and its treatment. In speaking of the diagnosis, he declares the idea, deeply rooted in some minds, that stricture of the rectum is either cancerous or syphilitic, is founded on error. Besides cancer and venereal diseases as causes, he describes strictures, according to their etiology, as congenital, spasmodic, due to pressure on the gut, dysenteric, tubercular, inflammatory, and traumatic. He describes treatment under the following heads: Dilatation; Incision; Partial Destruction, including Electrolysis and Radiage; Excision; Colotomy; General treatment.

By dilatation he means gradual stretching, not forcible divulsion. He finds it most applicable, in cases of limited severity, as a supplement to the treatment by incision or excision. Incision alone does not radically cure, but as a means of saving time and of gaining a wider passage than can be hoped for from dilatation alone, Dr. Kelsey thinks it of great value. Partial destruction, electrolysis and raclage are spoken of as examples of timid and meddlesome surgery.

With regard to excision he speaks hopefully but cautiously. One rule, he thinks, may be considered established—cancer should not be attacked with a knife unless there is reasonable certainty that it can all be removed, and that the lymphatics have not become involved to any extent. The method of procedure in excision of the rectum is described. Of the operation of colotomy Dr. Kelsey speaks highly, and he has had considerable experience. He differs from most of the older authorities in preferring inguinal to lumbar colotomy. As regards ease and certainty of performance, the subsequent cleanliness of the patient, and the ability to care for the opening, all the advantages, he says, are in favor of the inguinal opening. He has done the operation eight times, with six recoveries and two deaths.

The paper is an important contribution to surgery of the rectum, and Dr. Kelsey has done a service in writing it.

A TREATISE ON THE DISEASES OF INFANCY AND CHILDHOOD. By J. LEWIS SMITH, M. D., Clinical Professor of Diseases of Children, Bellevue Hospital Medical College, etc. Seventh Edition, thoroughly revised. With fifty-one illustrations. 8vo, pp. xiv, 868. Philadelphia: Lea Brothers & Co., 1890. Price, $5.50.

The appearance of a seventh edition of Dr. Smith's Treatise on Diseases of Children, indicates the exceptional activity which prevails in this special field of medicine. Dr. Smith writes that, since the issue of the sixth edition of his book, in 1886, so many additional facts have come to light relating to the etiology, nature and treatment of the diseases of children that the necessary revision has produced virtually a new book. Such a statement is all the more remarkable when we bear in mind that almost the same words were used by the author in his preface to the sixth edition, which appeared less than five years ago.

Dr. Smith's Treatise is so well known as a standard American work on the diseases of children that an extended review of it is unnecessary. The present edition, its author thinks, may be considered to have doubled in size, so far as the amount of information presented is concerned. He has endeavored to exclude all obsolete material, and to condense the text to the limit of clearness. The number of pages is not much greater, the new material having been accommodated by lengthening and widening the printed page, and using a somewhat smaller type. The effect of this change, so far as the eye is concerned, is not pleasing, but perhaps it is better than running the risk of making the volume bulky.

The present edition contains articles on the following subjects which were not treated in the former edition: Conjunctivitis, Icterus, Sepsis, Umbilical Diseases, Hæmatemesis, Melæna, Sclerema, Œdema and Pemphigus of the new born; Epilepsy, Tetany, Appendicitis, Typhlitis and Perityphlitis. There is also a paper on Intubation, by Dr. Joseph O'Dwyer.

In its present form the book is more compendious than formerly, but its practical value, as a trustworthy guide to the diagnosis and treatment of diseases of

children, has not been diminished. We congratulate its author upon having kept abreast of times which are remarkably prolific of discoveries in his special field, and cordially recommend the book to our readers.

CORRESPONDENCE.

Clinical Lecture by Dr. J. H. Musser.

To the Editor.

Sir: Kindly do me the justice of stating in your journal, that through an accident the Clinical Lecture by me, published in the Reporter, January 24, did not contain the corrections I had made on the proofs. I would not like to be held responsible for its inaccuracies and the erroneous statements regarding the classification of anemia. I do not hold to such classification and could not have made it.

Yours truly,
J. H. Musser, M. D.

Philadelphia.

QUESTIONS AND ANSWERS.

[In this department will be published questions on any medical subject by readers of the Reporter, and answers by the Editor or by other readers.]

What is the Best Stimulant in Impending Collapse?

Dr. W. H. Burr, of Wilmington, Del., writes: I do not wish to have the reputation of being a voluminous writer, but reading medical journals stimulates inquiry. I would like to have from some of your readers a short, scientific and at the same time practical method of treating persons in impending collapse from whatever cause, founded on good physiological reasons or experience, or both.

A good example to work on is the case of a patient exhausted by previous disease who is compelled to undergo a serious operative procedure as an only chance to save life. We have here three elements to combat. Exhaustion from previous disease, shock from operative procedure and anæsthetic influence. What drugs, if any, either by stomach, rectum or hypodermically, are most efficient to help tide the patient over the emergency? One author says alcohol finishes those who escape the anæsthetic effect; another prominent author uses alcohol very freely, and proves his theory by an experience covering thousands of cases. One author recommends hypodermic injections of ammonia, but does not say what form should be used, how much may be used or what the chances of abscesses are. Another recommends digitalis, but is equally reticent as regards quantity, physiological action, etc.

Let some one make a list of all diffusible stimulants which have an action on the vital centers. Let the list include alcohol, morphia, atropia, digitalis, strychnia, nitroglycerine, ammonia—most of these being, by the way, powerful poisons in doses of any great magnitude, and all differing among themselves in their ascribed physiological actions. From this list let there be some plan evolved, resulting in the use of one or more than one of these drugs, so that the defenceless subject may not be liable by well-meant, but ill-directed efforts to be overwhelmed by a multitude of powerful drugs indiscriminately applied.

For humanity's sake let there be a little more method in medicine.

NOTES AND COMMENTS.

The Koch Remedy in New York.

The January number of the medical journal called the *Post-Graduate*, the journal of the New York Post-Graduate School, says:

"There have been some grotesque and almost ludicrous incidents in the Koch excitement. The race to get and use the lymph before others; the suspicions raised, in one instance at least, that the lymph was not Koch's at all; the apologies of an ex-president of the Academy because his name was so much in the papers, and of the president himself, for his son, who was said by a *Herald* reporter to have given an enormous money value to a vial of lymph; the red-colored postals of the County Society announcing as 'Notice Extraordinary' that one of its members was about to tell what he saw in Koch's laboratory—all these things would make a graphic picture of medical New York in a ferment in the latter part of 1890. . . . ."

And again: "The dear old code, for which the New York State Medical Association was born, and in defence of which every member of the American Medical Association is supposed to be willing to die, has suffered dreadfully as a result of Koch's discovery. The whole medical profession throughout the civilized world has been en-

gaged in using, or in endeavoring to use, a secret remedy. We might expect this in lax New York, but in strait-laced Connecticut it is almost unbearable. The old code has given way in the field of its most enthusiastic devotees, about as badly as the Fugitive Slave Law did after the civil war had broken out. Yet the purest thing in this ark of the American Medical Association was the section about secret remedies and nostrums. We are pained to see unholy hands laid upon it, even in the name of Teutonic science."

Brown-Sequard Fluid in Tuberculosis.

The supplement to the *British Medical Journal*, January 10, 1891, says:

Dr. D. Uspenski, in a lecture recently delivered before the Russian Society of Public Hygiene (*Deutsche Medizinal-Zeitung*, December 29, 1890), gives an account of some clinical experments which he had made with Brown-Séquard's "emulsion" in the treatment of tuberculosis. He had tried this preparation in eighteen patients in different stages of the disease. Two of them had been quite given up. In one of these the patient was a lad of eighteen who had long suffered from mitral insufficiency, and who became the subject of acute phthisis in the beginning of May, 1890. After all other means of treatment had been tried in vain Uspenski had recourse to injections of Brown-Séquard's fluid. After the first three the general condition and the appetite were greatly improved, and after six injections the patient was able to leave his bed and walk about the room. The treatment was continued with the result that the strength and weight increased, while the temperature gradually fell, and the night-sweats diminished. After ten injections the latter ceased altogether, and the patient had so far recovered his strength as to be able to take a long walk in the open air. On June 15 the last injection (the fifteenth) was given, and the patient continued, through the summer, to improve in health and to gain weight (from 122½ lbs. to 148¼ lbs.). The tuberculous process in the lungs was at a standstill. In the other case the patient was a man, aged twenty-eight, who developed phthisis after influenza. There was considerable fever, with profuse night-sweats. There was infiltration of the right and, to a less extent, of the left apex, and tubercle bacilli were present in the sputum. At the beginning of May injections of Brown-Séquard's fluid were commenced; after the sixth the appetite increased, and after the twelfth the patient's condition was so much improved that he was able to leave his bed. After the eighteenth injection the temperature became normal. There has been no increase of weight, nor is there any perceptible amelioration in the condition of the lung. The patient, however, feels much better. In chronic cases the injections act more rapidly. In twelve such patients there was marked general improvement, with reduction of temperature and diminution of night-sweats after from two to four injections. Nine, or, at most twelve, injections usually suffice. Even amid the unfavorable surroundings of a prison infirmary Uspenski obtained good results by this treatment in seven cases. He considers that Brown-Séquard's fluid has a markedly strengthening effect, and is beneficial in all cases of phthisis without exception, whether the patients have any additional treatment or not, and whether they live under favorable conditions or the reverse. The tubercle bacilli do not disappear entirely, even in the most successful cases, but diminish in number in proportion to the extent to which the diseased process recedes. Uspenski says the remedy does not kill the bacilli, but weakens their pathogenic power.

Practical Method for Staining Tubercle Bacilli.

Assuming for the present that a practical process for staining and mounting tubercle bacilli will be acceptable to those of our readers who are already in possession of, and familiar with, a microscope, we will quote here a method of proceeding recently published by Dr. M. Friendlaender, of Berlin (in *Pharm. Zeit.*, November 22). This method permits two mountings to be made in from five to ten minutes, provided the operator is skilled and has everything in readiness.

The materials required are:

1. Ziehl's Solution.—This is a 5 per cent. aqueous solution of carbolic acid mixed with alcoholic solution of fuchsin (almost saturated).

2. A mixture of 100 gm. of alcohol of 80 per cent. and of 5 gm. of pure nitric acid.

3. A concentrated solution of methylene blue in water.

The mounting is done as follows:

A very small quantity of the sputum—about the size of the head of a pin—is taken up with the needle and spread by means of the latter upon an object-glass to a thin layer about covering the space of a ten-cent piece. The slide is then allowed to dry in the air, and meanwhile a second slide is commenced. The dry mounting is now drawn three times slowly through the flame of a Bunsen burner or alcohol lamp. Next 2 to 3 drops of the fuchsin solution are placed upon the mounting, and the slide held over the flame (mounting upward) until light vapors arise. The slide is now drawn once through water contained in a capsule, and the mounting then treated with a few drops of the acidulated alcohol, which is allowed to remain until the spot is completely decolorized (this will require about one-half minute). The slide is now again washed with water and then treated with a few drops of the methylene-blue solution, which is allowed to remain until the second slide (to which the operator now turns) has progressed to the same point. The first slide is now washed with water and finally dried with blotting paper [this is not advisable unless paper giving off no fibers is at hand] and over the flame.

Upon the mounting there is now placed a drop of oil of cedar (no cover glass), and the object examined with the lens (oil immersion objective).

Usually two specimens or slides suffice for determining the character of a sputum.—*American Druggist*, January 15, 1891.

Pleuritic Effusion in Children.

Dr. Herbert B. Whitney gives in the *Denver Medical Times*, December, 1890, an account of two cases of pleurisy with effusion in children, and then says: The treatment of pleuritic effusion should, I think, be very conservative. Without stopping to consider the measures, antiphlogisic and others, to be taken at the outset of acute febrile cases, I come at once to the important question as to whether paracentesis should be early resorted to, or should be as long as possible delayed. Henoch favors emphatically the latter course. He says the activity of tissue metamorphosis in children causes in general a more rapid absorption of serous exudations in them than in adults. He has seen so many cases of spontaneous absorption under simple diuretic and tonic remedies that he recognizes only two indications for operation: (1) When there is rapid and threatening increase in the quantity of fluid, so as to give rise to excessive dyspnœa; and (2) when the effusion has become purulent. In my two cases there was rapid absorption of the effusion under simple counter-irritation with iodine and tonics; in one, complete absorption in the unusually short space of a week, and in the second in about a month. I have also seen, in a child of three years, a pericardial effusion which was so large as to reach the sternal notch above and the nipple on the right, completely disappear under tonic treatment in the course of weeks. The number of cases also of empyema in children which recover fully after one or more aspirations, whereas in adults the radical operation is always necessary, is a further indication that the conditions in children are much more favorable for absorption than in adults. I believe, then, that paracentesis should be resorted to in those cases only where there is danger to life, or where long observation has shown no subsidence of the effusion under conservative and tonic treatment. An out-of-door life is usually indicated, and mountain or sea air is often very beneficial.

Early Spontaneous Rupture of the Uterus.

The *Lancet*, January 10, 1891, cites a case of rupture of the uterus, reported from Mexico by Dr. Eduardo F. Plá in the *Crónica Médico-Quirúrgica*, which is in several respects almost unique. The patient was a married woman twenty-one years old who had had only one pregnancy, which terminated satisfactorily five years before, since which time she had had no illness. A medical man was summoned hastily, as she had been suffering intense pain, and had suddenly become cold and collapsed. When he arrived she was dead. The official *post-mortem* examination was entrusted to Dr. Plá, who, after noting the absence of any marks of violence, opened the abdominal cavity, and found a quantity of blood and coagula, also the amnion containing a four months fetus, with umbilical cord and placenta. This had escaped by an irregular rent across the fundus of the uterus three inches in length. There were coagula in the cavity of the uterus, but no pus or

evidence of inflammation in the pelvic organs. The uterine wall was found to be extremely thin in the neighborhood of the rupture—under two millimeters—though in other parts it was as much as eighteen millimeters in thickness. A microscopical examination, which was made by Dr. San Martin, showed that in the region of the rupture the muscular coat was practically absent, being represented by a very few attenuated fibers; the mucous coat, too, was absent, being replaced by fibrous tissue without glands and with scarcely any vessels. Altogether the appearance was that of a cicatrix, but no history of any injury or disease could be obtained. The placenta was perfectly normal.

Charpentier mentions eight cases of uterine rupture at or before the end of the fourth month of pregnancy, and Dr. Plá mentions two cases cited by Burns in addition; these ten being all that he could find in literature. In most of these cases the patient was much older and had had difficult previous labors, and, again, the seat of the rupture was much less commonly the fundus than the lower segment. In the present case, being over the insertion of the placenta, the hemorrhage was great, and so led to the immediate fatal termination, whereas several of the other cases died later from peritonitis, and in one, that recorded by Dr. Drake, the fetus ultimately made its way out through an abscess in the umbilical region.

Anti-Kidnapping League.

The *Public Ledger*, of Philadelphia, states that the week before Christmas a new national association was organized in New York, under the name of the "Anti-Kidnapping League." The purpose of this league is to hunt down every case of imprisonment of sane persons in insane asylums which it can hear of, and give such assistance as the case demands.

The idea of the League originated with Miss Clarissa Caldwell Lothrop, of New York, who was herself the victim of the kidnapping the society has been organized to prevent. She was incarcerated for two years in an asylum, and when she was released she began the work of exposing the evils of which she knew, at the same time working for the organization of a national society to prevent the kidnapping and incarceration of sane persons. The society was organized December 19, 1890, and many men and women of position and influence are included in its membership.

It is said that the investigations of the League show that in seven years fifty-six sane persons were imprisoned in the Buffalo Asylum, and that this is admitted by the Asylum authorities in their reports. It is also asserted that the Utica Asylum admits that over one hundred sane persons have been imprisoned there in thirty years. The Society admits in many cases there is no fault on the part of the Asylum authorities, but says that the fact that eleven sane persons are annually incarcerated in two institutions shows that in the numerous public and private asylums there is a field for the Anti-Kidnapping League.

The Physiological Action of Sulphaldehyde.

Sulphaldehyde, produced by the action of sulphuretted hydrogen on ethylic aldehyde, occurs in the form of an oleaginous liquid of a repulsive odor, solidifying slightly below the freezing-point. Treated with acids, sulphaldehyde is transformed into a solid, the point of fusion of the various articles of commerce varying in accordance with their greater or less purity. Its analogy in composition to paraldehyde led Dr. Lusini to test the physiological action of the sulphaldehyde, administering it by injections intraperitoneally, and into the stomach of rabbits and frogs (*Les Nouveaux Remedès*, November 8, 1800).

It appears that sulphaldehyde produces profound and tranquil sleep without any phenomena of excitation. On account of its insolubility, some time is required before its effects follow its administration; nevertheless, it is claimed to be much more energetic than paraldehyde. It is eliminated completely by the urine, to which it gives its characteristic odor.—*Therapeutic Gazette*, January, 1891.

Cocoanut for Tape Worm.

Dr. W. R. Allison, of Good Hope, Ill., writes, in the *Peoria Medical Monthly*, November, 1890, of a man aged 35, who had always enjoyed good health, and who noticed some time ago that segments of worm were found in the discharges of the bowels.

He was ordered to fast for twenty-four hours and to take before breakfast the fol-

lowing day some pumpkin-seed tea, followed with a laxative, with the good results of causing the expulsion of about eighteen feet of the worm. All seemed well for about six weeks, when segments again appeared in the stools and were also discharged in his study or sleep. The man was accordingly given felix mass and passed about fifteen feet of tænia solium, which gave the usual result of seeming health for a period of from four to six weeks, he being able to sleep well and complained only at the time of the reappearance of the segments, of a slight inability of concentration of thought. He never seemed to have any other symptom of the parasite.

He now used chloroform and at another time turpentine with no good results when he by chance read of some one who had eaten a cocoanut and was surprised to see that he had discharged a tape worm. Accordingly he determined to try the same remedy, and was rewarded for his efforts by the discharge of twelve or fifteen feet of worm. As cocoanut is more pleasant to prescribe than many of the usual remedies, and does good with no bad results to the patient, and brings the worm without the usual following of a cathartic, Dr. Allison is pleased with its effects.

His patient drank the milk and ate the meat of the nut until he was satisfied that more would have made him sick.

Another Koch Institute in New York.

The daily papers of February 3, announce that a new Koch Institute for the treatment of consumptives was opened in New York the day before. It is a four-story brick structure, fitted up with all hospital conveniences. There is room for thirty-five patients in it. Dr. Alexander I. Aronson, who spent three months in the Berlin Clinics under Koch, is in charge and will be the resident physician.

[Now is the time to conjure consumptives by the name of Koch; before long it will be too late.]

New Operation for Club-Foot.

The Annals of Surgery, December, 1890, says that Dr. Mensel, of Gotha, has enucleated the bony nucleus in the neck of the astragalus of a patient suffering from congenital bilateral club-foot. The patient had had the regular orthopedic treatment for club-foot, but after forcible redressement of the feet, plaster and splint were applied, and after eight days the patient contracted gangrene from pressure on both feet. During the process of granulation the feet not only became as bad (varus) as originally, but even worse. The cicatricial tissue was not favorable to the treatment in the regular way, and the author exposed the astragalus of the patient (2½ years old). At this age the astragalus is composed for the most part (body) of cartilage and the bone nucleus is situated in the neck of the bone. It was comparatively easy to expose the neck of the bone without opening either the scaphoid or ankle joint, and by cutting into the neck the bony centre could be easily enucleated. The deformed bony nucleus may be very potent in the causation of the varus position, and after its removal the cartilage can be easily molded into a normal position. After removal of the above it was easy to bring the foot into good position without any great force, and cure was complete. The advantage gained is the retention of the body of the astragalus and the integrity of the ankle and scaphoid joints.

The operation is only indicated before the third year, and author would only perform it when the orthopedic treatment is not possible.

OBITUARY.

JOHN McCARRELL, M. D.

Dr. John McCarrell, who has for many years been a subscriber to the MEDICAL AND SURGICAL REPORTER, died at Wellsville, Ohio, January 18, 1891, about seventy years old. Dr McCarrell was born and reared in Washington county, Pa. He read medicine and practiced fifteen or twenty years, then about 1866 removed to Wellsville, and rapidly won a practice which proved very lucrative. He had not a very robust constitution, yet seldom saw serious illness. When dangerous disease did get a firm hold upon him it carried him off in brief period.

Dr. McCarrell was a man much loved and trusted in the community in which he lived, and an exemplary Christian. His life was one of usefulness and beneficence, and his death is deeply deplored.

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Clinical Lecture.

CHRONIC ENLARGEMENT OF THE TONSILS OF CHILDREN.—EPILEPSY.[1]

BY H. A. HARE, M. D.,

CLINICAL PROFESSOR OF DISEASES OF CHILDREN IN THE UNIVERSITY OF PENNSYLVANIA.

Gentlemen: The first case I have to show you this morning is one of a character which is quite frequently met with, namely, an enlargement of the tonsils with some follicular inflammation, but chiefly consisting in an increase in the connective tissue, an interstitial tonsillitis of a chronic type. This condition is accompanied by a protrusion of the tonsils across the pharynx, in this case touching the uvula on one side, and almost touching it upon the other. Often the uvula is touched upon both sides. On examining this throat, you will notice that the mucous membrane over the tonsils is hyperemic, reddened and inflamed, but not covered with the white spots which are frequently seen. This tells us that this is not a case of pure follicular tonsillitis; for in it we have large quantities of a cheesy material poured out, which so closely resembles the false membrane of diphtheria, that a false diagnosis is often made. The exudate can be removed, however, on a small probe, and leaves behind it no bleeding or raw surface. This is not the case in diphtheria, where the membrane is adherent, and on removal leaves a bleeding surface. In acute tonsillitis, true quinsy, or suppurative tonsillitis, death seldom occurs. It is curious that strangulation does not more frequently occur from rupture of the abscess during sleep, or that pneumonia does not result from the swallowing or breathing in of this material, the so-called *Schluck-pneumonie* of the Germans.

Most commonly these cases come to the physician because the child has a constant paroxysmal cough, which almost ceases during the daytime, but is persistent at night, especially in the early hours of sleep. A careful examination of the chest in these cases of tonsillitis shows no sign of pulmonary trouble. The cough is a pharyngeal or uvular cough, due to irritation. The cause of the cough is not identical with that of an ordinary cough, but is due to the two enlarged tonsils which protrude and tickle the uvula. During the daytime the muscles are held tense, and the tonsils are thus prevented from touching the uvula; but if an involuntary relaxation occurs, as in sleep, the uvula is tickled, cough results, and the child awakens. At times it is even necessary for the child to sit up in bed to relieve the cough.

It is difficult to treat such cases; much more so than cases of acute follicular tonsillitis, which may be treated with diuretics and cardiac sedatives, and with the local application of cold or heat. In the treatment of the present variety, several interesting points must be considered. Is chronic interstitial fibrous enlargement of the tonsils severe enough to interfere so seriously with respiration as to make the removal of the tonsils necessary? A great many physicians, especially in France, recommend their removal. On the other hand, I have seen several experienced surgeons operate upon the tonsils and encounter excessive hemorrhage. As you well know, any severe operation upon the mouth is very apt to be accompanied by profuse hemorrhage.

The next heroic treatment after tonsillotomy is igni-puncture, or the use of the actual cautery. It consists in the insertion into the enlarged mass of a small electric cautery, or the ordinary red-hot iron. The inflammation which ensues around the burns

[1] Delivered at the University Hospital.

results in fibrous or cicatricial contraction, with a consequent decrease in size of the organ. This results in a ragged-looking tonsil, with crypts in which food may accumulate and undergo decomposition, with the production of fetid breath. A mouth wash or gargle of carbolic acid (1 to 100), sweetens the breath and prevents decomposition from going on. Notwithstanding its drawbacks, however, igni-puncture is the operation to be resorted to, instead of tonsillotomy. It is safer and just as efficacious. However, in all these cases, the patient at first desires you to temporize with medicinal measures; and probably the best medicine for an adult is iodide of potassium, five grains three times a day, at the same time painting the tonsils with equal parts of iodine and glycerine, or one part of iodine to three parts of glycerine, and also painting the skin externally with tincture of iodine, or rubbing in iodine ointment. If you employ iodine ointment over enlarged glands in children, it must be mixed with lard; as it is too strong to be applied in its officinal strength. Simple or benzoated lard may be used with an equal amount of the iodine ointment. If the child is the age of this one (8 years), probably you will not be able to give it iodide of potassium in effective doses, as the drug would be apt to disorder the stomach. You should use in its place the syrup of the iodide of iron internally. Most of these children are anemic, and iron is needed. Iodide of iron also exerts a peculiar influence over inflammation of the upper air passages. The syrup should be given in doses of five drops or more three times a day.

On looking at this child's tongue you will notice that it is black. This is due to the iron, which also blackens the feces. The discoloration is due to the presence of sulphide of iron. It is well to warn the mother that this will occur, to prevent needless alarm.

To be more definite, what shall we do for this case? We shall give her five drops of the syrup of the iodide of iron three times a day, and apply externally over the enlarged tonsils ichthyol ointment, night and morning, two drachms to the ounce of lard. If no irritation of the skin is produced, we shall apply it at noon as well. It is impossible to make applications to the tonsils internally every day, and it is dangerous to give iodine solution to parents of young children, with which to paint the child's throat. If I should give anything, it would be a solution of one drachm of tannic acid to two ounces of glycerine, to be applied with a camel's-hair brush.

I forgot to mention one other course of treatment which may be resorted to after igni-puncture, and that is the use of the solid stick of silver nitrate. This is especially useful when there is a complication of chronic interstitial tonsillitis with follicular tonsillitis. By using the stick in these cases you mildly cauterize the tonsils, and achieve good results.

The slight deafness which is frequently complained of by patients with enlarged tonsils is due to an extension of the inflammation from the tonsils to the Eustachian tubes, which either become patulous or plugged with mucus.

Epilepsy.

The next case is one of epilepsy: an extremely common disease, and of frequent occurrence among children. The case is one of ordinary idiopathic epilepsy, unfortunately not dependent upon trauma or tubercular growths, and consequently unfavorable as regards prognosis. It depends upon some organic change which the microscope so far has not been able to reveal. The boy, however, has one symptom which gives us a clue, sufficient to start us on a tour of investigation as to whether it is a true epilepsy, or an epilepsy hysterical in origin. His aura consists in the sensation of a globe rising in the throat, which, as it reaches the level of the glottis, terminates in an attack of epilepsy. Hysterical epilepsy may occur in young males as well as in females. There is also a possibility of this case being one of the so-called reflex epilepsies. A number of authorities claim that there is no such thing as a reflex epilepsy; but I think that it is proved conclusively that a certain number of these cases are reflex, and in such cases the removal of the cause is apt to be followed by a cure of the epilepsy. An adherent and elongated prepuce is one of the most common causes of this variety of the disease. In such cases the prepuce is never thoroughly emptied of urine; and the retained urine sets up an inflammation which may even result in ulceration. In other cases a large amount of smegma collects around the corona, and an inflammation is thus excited. In these cases circumcision is always to be tried. It may or may not do

good. In other cases some foreign body may be found in some portion of the system, which by its presence creates sufficient irritation to produce a reflex epilepsy. The nose especially should be searched for such a cause, as beans and other bodies are often placed there by children.

The variety of the auras which come on in epilepsy is very great. Probably there are as many as ninety different forms described. The globus hystericus, tingling in the fingers, tingling in the toes, hallucinations and sudden interruption of the heart, are but a few examples of the great variety of forms it assumes. There is a point of interest in regard to treatment connected with the aura. If an attack is always preceded by an aura, the prognosis is more favorable than if the aura does not come on. One nervous act always predisposes to another nervous act, and the second act is much more violent as a rule than the first. This is especially noticeable in epilepsy. Now you can see at once that those cases which have an aura may be more favorable in prognosis than the others; since, if the aura is of any duration we can generally, by using nitrite of amyl, avert the subsequent nervous act; and if we do not have the first nervous act, we will not have the second. Thus, if the patient can succeed in putting off his attacks for a year, he will probably be permanently improved. For this purpose, pearls of nitrite of amyl, containing two or three minims each, should be kept in the pocket, and one should be broken and used from a handkerchief as the aura is felt.

Another factor governing the prognosis of these cases is to be found in the habits of the parents as regards the use of alcohol. A number of statistics made in France show that a child of alcoholic parents is especially liable to epilepsy; and this is greater if both parents are addicted to the use of alcohol. The prognosis is more grave when both are alcoholics. Syphilis also must never be overlooked in these cases.

In a certain number of cases of epilepsy it will be noticed that the child will have a rotatory convulsion preceding the attack. What the cause of these rotatory convulsions is, is not fully known.

This boy does not suffer with prolonged unconsciousness or coma, as is usual in most cases.

There is one other thing I should impress upon you in studying a case of epilepsy. Ascertain if any portion of the body is first affected, as evinced by a movement of one thumb, or of a hand, or leg, or by a flushing of one portion of the body. This may give a clue as to where the lesion is that produces the attack, or indicate whether or not the disease is idiopathic in nature. I remember seeing a man under the care of Dr. Hughlings Jackson some years ago, who was paralyzed in the lower extremities from Pott's disease, and who suddenly developed an epilepsy in which the movements were confined to the upper extremities. The thumb of the right hand was the first portion of the body affected by the paroxysms, and the diagnosis was made that the thumb centre upon the opposite side of the brain was involved. Accordingly the man's skull was trephined, and a tumor the size of a hickory nut was found and removed, with subsequent complete or partial cure of the epilepsy.

In the treatment of these cases of epilepsy, bromide of potassium is the standard remedy. I think that sodium bromide is better for children, as it is not so apt to disturb the stomach. The best way to administer it, is in solution; since it deliquesces if in powder form. Some authorities claim that it is not so active as the potassium salt; but I am unable to vouch for the accuracy of this assertion. In gouty cases, the bromide of lithium may be of service. In all cases endeavor to put off the attack by the use of the nitrite of amyl. If you give bromide of potassium to a child—and always when you are giving it to women—give with it Fowler's solution. This exerts a useful influence on the disease in some cases, and it also prevents the formation of acne. Two to three drops should be given with ten grains of bromide.

A form of reflex epilepsy which I should have mentioned, occurs in little girls from the migration of seat worms from the rectum into the vagina, with the production of great reflex irritation and convulsions. The cure of the disease here is obtained by removing the worms. In all cases of this kind, however, the prognosis must be guarded. If the child has had but one or two fits, the prognosis is good; but if it has had ten or twelve, the habit has been produced, and this may become more and more persistent as the child grows older.

—Helenin, the active principle of elecampane root, is claimed by Marpmann to prevent development of tuberculosis.

COMMUNICATIONS.

CLIMATIC TREATMENT OF PHTHISIS.[1]

BY J. P. CROZER GRIFFITH, M. D.,

PROFESSOR OF CLINICAL MEDICINE IN THE PHILADELPHIA POLYCLINIC; PHYSICIAN TO ST. AGNES AND THE HOWARD HOSPITALS, AND TO THE RUSH HOSPITAL FOR CONSUMPTIVES.

That change of climate is one of the best —and sometimes the only—means of successfully treating phthisis is so universally admitted that it seems almost unnecessary to make mention of it. There are, nevertheless, certain details regarding it, which it may be not without interest to pass in review. For centuries this method has been in repute. The Romans used to send persons with ulcerated lungs to Libra that they might there inhale the balsamic odors from the pines; and Galen advised that phthisical patients be sent to localities in which the air was dry.

Even those who write upon the Home Treatment of consumption, admit the value of climatic treatment where it can be carried out. It goes of course without saying that the vast majority of phthisical patients, owing to pecuniary or other disability, cannot be sent away from home. The all-important subject of the means to be employed for the recovery of health in these, I cannot now treat, but must confine myself strictly to the subject of the influence of climate upon the disease.

I am myself so thoroughly convinced of the value of climato-therapy in phthisis, that were I assured that I had incipient phthisis, however slight, neither inhalations of oxygen, nor the use of compressed or rarified air, nor the breathing of hot air, nor enemata of foul air, nor trial of Koch's inoculations, nor pulmonary gymnastics, nor the ingestion of cod-liver oil, iron, arsenic, digitalis, creasote or any other drug should prevent me—if in any way I could compass it—from leaving a climate such as this for some more propitious one. And yet there are the sceptical—there always are, of every good thing. Let me, however, give you as samples, the histories in brief of two cases which were sent to parts of the world far removed from here and from each other:—the Austrian Tyrol and Colorado. They occur to me because I have heard from each of them within a short time. The first patient developed apical phthisis some five or six years ago. Being a man of means he traveled, chiefly to various parts of the eastern United States, remaining in each place but a short time and returning again home. While away he improved, but always lost again on coming back. Finally his cough grew worse, there was slight hemoptysis, and examination showed decided depressions at the left apex with dulness on percussion, bronchial breathing and râles. I sent him to Meran in the Austrian Tyrol, where he remained for over a year. On his return I was astonished to discover that the dulness on percussion, the depression and bronchial breathing had entirely disappeared; leaving nothing but a few râles. An improvement such as this had not been effected by all the medicinal and hygienic treatment to which he had been previously subjected. I told him, however, that he had returned too soon, and the event proved the truth of this. He was shortly after returning, debilitated by a very severe attack of herpes zoster, and the subjective and objective symptoms of the phthisical affection returned in full force by the end of a year. He has again gone to Meran, where he now is, and is doing remarkably well. He has no cough at all, and only slight expectoration on rising in the morning. Can he be induced to remain sufficiently long, I have no doubt of his complete recovery.

The other patient is himself a physician from a neighboring city. He called upon me last July on account of obstinate cough, with loss of weight and strength, which drugs, rest and a temporary mountain sojourn had failed to relieve. He suspected phthisis, and wished to have a diagnosis made. Neither bronchial breathing nor impairment of percussion resonance could be detected, but there were a large number of râles at the left apex, and a few on the other side. Tubercle bacilli were present in the sputum. I told him there was no doubt he had incipient phthisis, and advised him by all means to go to Colorado and begin the practice of his profession there as soon as he felt able. He did so, and wrote me the other day, saying that he had gained 22 lbs., but asked my advice about coming on to take the Koch treatment, as he did not believe that he was yet quite cured. My

[1] Read before the Philadelphia County Medical Society, January 28, 1891.

answer can be readily imagined. But cases like these are known in numbers to all of you. Only recently one of the members of this Society told me that, visiting in Denver recently, he sat down to dinner with, I think, fifty men, all of them as hale and hearty as one could wish to see, though all or nearly all of them had gone West on account of trouble with the lungs.

Now as to the way in which climate can act in curing phthisis. If it is the fact, as most of us certainly firmly believe, that phthisis is the direct result of the growth of the tubercle bacilli in the lungs, the question naturally arises how climate can in any way affect the growth of these organisms after they have once found a nidus in the system. This question cannot be answered with positiveness. One matter bearing upon it is, however, nearly certain. It would seem probable that the only reason that all of us do not take the disease is that, either from the good condition of the general health, or from some peculiar, unsuitable state of the respiratory tract, the bacilli which we all probably inhale at times, do not find in certain individuals the conditions suited for their development. Given, then, a patient with pulmonary phthisis, our efforts must be to render the lungs again of such a quality that bacilli already present can no longer thrive and multiply. It seems beyond question that certain climates have the power of accomplishing this desideratum in some way unknown to us, but certainly more effectively than any other known agent. What peculiar climatic features they are which have this power is, as yet, not determined with definiteness. The most generally accepted view is that high altitudes, as a rule, are inimical to the development of phthisis, and conducive to the recovery of those already affected; while a low elevation above tide-water, especially if combined with dampness, continued high temperature, or frequent changes of temperature, favors its development. Particularly are writers almost at one in reference to the favorable action of high altitudes. Phthisis is of rare occurrence, for example, in the high mountain cities of Mexico, in spite of the unfavorable influence exercised by the bad hygiene and the employment of the inhabitants largely in mines.

The disease is almost unknown in the high plateaus of South America, and rare in the high portion of the western United States. Switzerland is, on the whole, remarkably free from it, and it is very rare in the highlands of upper Egypt. In the western Highlands of Scotland, too, it is uncommon as compared with other parts of the British Isles.

It is not yet definitely understood whether the immunity of the dwellers in high altitudes is due to the low barometric pressure or to the purity of the air. The view has not found favor that it is in any way connected with the greater depth of the respiratory act; nor does the statement that microbes live with greater difficulty at a high elevation satisfactorily explain it. That the influence of high elevation is not due, at least entirely, to the low barometric pressure seems probable; since, as is well known, prolonged sea voyages are often of great benefit to phthisical patients. Moreover, some islands, as Iceland and the Hebrides and Shetland Islands, are singularly free from the disease; and the Kirghis enjoy an absolute immunity, although they inhabit steppes only 100 feet above sea level,

It has been long assumed that odors of turpentine and allied substances coming from pine forests were of value in the treatment of phthisis, and it has been claimed that to this factor sojourn in the Adirondacks owes the undoubted advantages often exercised by it in many cases of phthisis. There are clearly, however, other important factors; since otherwise all regions filled with these woods should exert the same favorable influence. Yet there are many such districts—as Maine—where the mortality from phthisis is high. One might argue that the mortality in such places was the result of too great a degree of dampness; but in answer it may be noted that many islands, as already stated, where the air is, to an extent, damp, suffer but little, if at all, from phthisis. In fact, the prevalence of the disease does not seem to be connected with any geographical position or condition of temperature.

Our knowledge in this regard may be summed up by saying that change of climate is very often of the greatest benefit to phthisical patients, and that, as a rule, this benefit seems to be intimately associated with elevation above tide-water, though there are many localities with no considerable altitude where a good effect is often exerted upon the disease.

It will repeatedly be observed that the relation of a patient to a certain climate is very much like that which exists, or should exist, between a man and his wife. Just as

one man finds in his wife's character and disposition that which entirely satisfies his moral nature, while his neighbors, perhaps, can see no good in her at all; so one phthisical patient may thrive in a certain locality, while the next patient, with lungs in apparently the same condition, is never comfortable there, and suffers a continual deterioration in health.

It is this fact which renders the matter of choice of climate so exceedingly difficult. It is impossible entirely to determine the nature of what might be called *climatic idiosyncrasies* in patients. We are, therefore, obliged, in the choice of a climate for a patient, to follow certain general rules. First is to be investigated the individual susceptibility to cold and heat respectively. We must carefully inquire whether the patient is always chilly in winter, or whether he is exhausted and depressed in summer. It seems to me to be folly as well as cruelty to compel an anemic, emaciated individual, who is always chilly and whose circulation is feeble at the best of times, to spend a winter in a cold, bleak, windy, northern elevation. While the Adirondacks in winter are certainly of benefit to many, it would seem almost proved that they cannot but disagree with others; in fact, experience proves that they do. On the other hand, there are many patients to whom even the early spring warmth of Florida is invariably depressing, and who reap no benefit from sojourning there. It is, after all, hygiene throughout which we must keep in mind, and not merely the effect of a certain climate upon the lung alone, as though it did not belong to the body.

Another factor of some importance in selecting a locality is a knowledge of the *diurnal* range of temperature. The annual average temperature, and the average for each month, can usually be ascertained without difficulty for the more frequented health resorts, but the daily variation is not so easily to be learned; and yet it is on just this factor that the comfort of the patient may depend. A perfectly equable temperature is certainly of great advantage. Unfortunately it is not so apt to be found with dry air and elevation above the sea as it is at lower regions. Although elevation is, as a rule, much the most important, yet in some cases it will appear best to select the sea on account of the smaller diurnal temperature range.

Still another matter is the nature of hotel accomodations and other creature comforts; and this has to be considered most carefully in reference to the individual. Though a strong man with beginning phthisis, which has had but little effect upon his general health, may do well if sent to a region where he will spend his days in the saddle and his nights in the open air; it is clear that, for women and many male patients, no such regimen can be prescribed.

Patients want to know all these and similar details before leaving home, and it is well if the physician can help them in this respect. In many cases, however, circumstances prevent more than the pointing out of a general plan of action; especially as the number of places recommended as health resorts in phthisis is so large.

Individuals, with beginning phthisis, who are unwilling to make a radical change, or in whose case the physician does not deem it expedient, might seek Florida in winter, returning northward in the spring by slow stages, stopping *en route* in Georgia and North Carolina. In the summer some mountain resort should be selected, preferably the Adirondacks. There are, nevertheless, weighty objections against this course. It is very difficult to return North without feeling the bad effect of the change of temperature; while a still greater objection is that the length of time, during which this continuation of travel must be persisted in, is too great for the patience of the invalid, thus kept so near home and occupation, and yet debarred from them. I have, however, seen cases, presumably of phthisis in its earliest stages, apparently entirely cured by a short absence from home in some such manner as this. It might be well in some instances to begin treatment in this way; but if the physical signs are well marked, only the shortest trial should be given to this plan, as valuable time may be lost thereby. These more advanced cases, if in fairly good condition, and offering good hope of final recovery, should at once be subjected to a radical change of climate—either for an indefinite period, or for life.

The question whether a station in the mountains or at the sea level is to be selected must be decided to some extent in accordance with the idiosyncrasy of the patient, as far as this can be determined in advance. As a rule, a mountain resort is far preferable and should be chosen whenever practicable. Statistics certainly show that the results in the mountains are better.

Our own country offers several excellent localities for phthisical patients. Of all of them perhaps the high altitudes of Colorado are to be preferred, since here can be found comfortable accommodations combined with pure, dry air and high elevation. In the "Parks" of this State we find table-lands of 10,000 feet elevation above the sea, protected by surrounding mountain peaks, and with an annual range of temperature less than in the Eastern States of the same latitude. Sudden diurnal changes do occur, it is true, but to no greater extent than in all elevated regions. The rainfall is, also, very slight. It has been stated that the dust prevalent as a result of this is irritating to the respiratory tract; but this is denied by those who have accurate knowledge in the matter. In spite of the thousands of phthisical patients who frequent the State the death-rate from consumption is very low.

New Mexico and Arizona offer somewhat similar advantages in the way of climate; but the facilities for living are not so great. The summers, too, are apt to be very hot. There are localities in Texas, too, which are excellent.

Southern California presents many advantages, not the least of which is that patients can easily vary their elevation from that of the sea level to a considerable mountain height, according to the different seasons of the year, and to what is found to best suit their health.

Florida is not so favorite a resort as formerly, and physicians preferring high altitude will not, of course, recommend it at all.

Phthisical patients in Europe can make choice from a large number of summer stations, all equally good, or can go from one to the other as fancy dictates. A winter one may be chosen in like manner. The passage from one to the other may be made gradually by means of intermediate stations whose climate is midway between that of the others.

Nowhere does the climatic idiosyncrasy come into play more than in the choice of quarters in Europe; what suits one patient for winter, for example, being entirely too rigorous for another. For summer time there is, as a rule, probably no better place than the high valleys of Switzerland, and prominent among these is the Engadine valley. This valley, however, is scarcely free from snow before the middle of June or the first of July, and becomes cold early in the fall; so that, as a pure summer resort, it is not long tenable. It is also subject in summer to cold and disagreeable winds. In spite of this it is unexcelled by other localities for the climatic treatment of phthisis. Davos-Platz also enjoys a similarly good reputation. The neighborhood of Zermatt also fills the requirements of elevation and coolness during the hotter summer months. There is no difficulty in choosing among a number of other places equally well adapted. Lower valleys may be selected if the summer is unusually cool, but the higher elevations are much to be preferred, as far as freedom from phthisis is concerned. Farther east there are various resorts in the Dolomite region which are highly recommended. There are numerous other places throughout the mountains of Germany, but for American patients Switzerland and the Tyrol offer every advantage to be derived from climate, while they possess other desiderata not to be found elsewhere.

For early summer and early fall other localities than those mentioned are to be preferred. The choice of such a station is a rather more difficult matter. Some of the lower portions of Switzerland may be selected; as Interlaken, the neighborhood of Lucerne, and the shores of Lake Geneva. Probably the latter situation is the best. Vevey and Montreux form here excellent intermediary stations. Ischl and Reichenhall, in Austria, are also recommended, and the Black Forest, in Germany, presents many attractions. One station which offers in some respects peculiar advantages as an intermediary station is Meran, in the Austrian Tyrol. It is beautifully situated and sheltered from the winds; and patients are able to spend a great deal of the time in the open air.

Finally, as to the choice of a winter station. For weakly individuals who shun any degree of cold or variation of temperature it may not seem best to select an elevated station. For such the south of France, the south of Italy, Sicily or the Riviera, have long and justly been popular. Or the patients may pass from Europe into Egypt, Algiers or Morocco. But for uniformity of temperature and of barometric pressure there is probably no place known equal to the Canary Islands. Madeira, once so popular, has fallen off greatly in general favor. For a large number of phthisical persons a dryer, colder and more bracing climate at a greater elevation is more suitable, even in winter. For these Meran is eminently

adapted, provided only a moderate degree of cold is desirable. The sunshine here is always quite warm, and patients are able to sit out of doors in it the greater part of the day.

Still more popular have the Engadine valley and Davos-Platz become, even as winter stations. The cold, it is true, is severe, but it is dry cold, and the unpleasant, raw winds of summer are absent at this period of the year; while the thermometer in the sunshine registers high, as is usual in all climates of high altitude.

It is to be borne in mind as an inviolable rule, that such a climate is to be selected either for summer or winter, as will allow the greatest amount of exercise in the open air with the least discomfort to the patient, and with the greatest advantage to the general health.

What has been said is but the briefest and a necessarily incomplete outline for governing the choice of climate for the patient. A few words must be added on what might be called the choice of the patient for the climate.

There has existed a wide-spread prejudice against high altitudes in cases of decided tendency to hemoptysis. This prejudice is, in the opinion of the best authorities, unwarrantable. Patients with this tendency are perhaps even safer in the mountains than at the sea level. The cases most suited for climatic treatment of any kind—as, indeed, for any other method—are those with but slight infiltration, with but few symptoms of the disease, and with strength sufficient to permit of abundant exercise. These patients should, as a rule, be sent to high altitudes for summer, and very probably for winter also. Other cases with a greater extent of pulmonary lesion, and with a less degree of strength or of resistance to cold will probably need the lower, warmer winter resorts, followed by the intermediary stations, and these again by the highest elevations for the summer months. In a still more advanced stage of the disease, especially where there is much elevation of temperature with severe subjective symptoms, the patient is not in a condition to stand much traveling nor to take much exercise. In such cases cold situations are out of the question. A warm, equable climate is to be chosen, and the nearer home the better. If improvement take place a more mountainous locality should be sought as soon as possible. The existence of fever is not, however, *per se* a contra-indication to high altitudes. It has often been observed that patients lose all fever soon after reaching the mountain resorts. Nor is the presence of a cavity a contra-indication in the selection of high elevations, provided the lung is not evidently rapidly breaking down. Cases which are very far advanced and evidently hopeless should not, of course, be sent away at all; for only a hastening of the final end of the disease can come to the patient, with disappointment to the family, and reproach to the physician. It should be further clearly explained to patients, in whatever stage the disease is, that change of climate is not an infallible cure, and, further, that with it must be conjoined all other necessary hygienic and dietetic measures, together with the employment of such medicinal agents as are indicated by the disease.

[The author would acknowledge his indebtedness to the writings of a number of authors, to whom no direct reference has been made in the text. Among these are the following: *Wanderings in Search of Health*, H. C. Taylor, 1890; *Phthisiology*, G. A. Evans, 1888; *Climate and Health Resorts*, Burney Yeo, 1890; *Treatment of Disease by Climate*, by Hermann Weber, in *Ziemssen's Hand-book of General Therapeutics: Etiology, Diagnosis and Treatment of Tuberculosis*, H. V. Ziemssen; Articles by Shattuck, Loomis, Solly, Westbrook, Platt, Gihon, Curtin, Knight, Bowditch, Bruen and others in the *Transactions of the American Climatological Association;* Ruehle, Article on "Consumption" in *Ziemssen's Hand-buch der spec. Path. u. Therapie.*]

PERMANENT OPENING OF THE DRUMHEAD AND THE ARTIFICIAL DRUMHEAD.

BY B. M. BEHRENS, M. D.,

CHICAGO, ILL.

It is the common belief that perforation of the drumhead is a final result of an otitis media, or tympanitis, and that the closing of the perforation is well-nigh impossible in most cases. This sceptic view is held not only by the medical profession at large, but also by otologists. Of this we can convince ourselves best in the otological text-books, where it certainly is mentioned, that the

perforated drumhead shows a vigorous effort at closing, or trying to close, but not a sufficently vigorous one. The last resource is therefore the artificial drumhead, from the little cotton pellet to the rubber drum, that may in some cases bring a naturul closure about by the continual irritating effect on the edges of the remaining part of the drumhead, but mostly is employed only with the view of improving the hearing and protecting the middle ear. It does improve the hearing very often, of course; but the protection of the middle ear is of so dubious a nature, that where it is possible to do better, it ought to be discountenanced. Where the perforation is of a large extent, the risks are less than in cases of small perforations, because we in the first cases can better master the ill effects that might be caused by the irritation of an artificial drumhead, but here also it is unquestionably the best policy to try to effect a closing of the perforation.

To dispel the existing scepticism, I have the pleasure of presenting some illustrations of cases that will explain the possibility of closing even large perforations better than words can do. Such cases are few and far between, for the reason that patients will seldom submit to a treatment lasting for months, not to speak of the uncertainty of the final result of the undertaking. In the course of several years, though, I have had so many good results, that I dare lay down the rule, from which there are very few exceptions, that any perforation of any size in the membrane proper can be made to heal up, provided the remaining part of the drumhead is not degenerated. I beg to remark that I speak of perforation in the membrane proper, and not of peripheral loss or defect, nor of perforations in the Schrapnell membrane. The secret of this rests in the fact that the drum membrane owes its great regenerative power to the elastic tissue in the membrane proper, while the Schrapnell membrane is entirely devoid of this tissue.

As to peripheral loss or defect, the difficulty of healing depends upon the fact that the bony part of the tympanic ring contributes a part of the aperture in the passage. Any effort to bring a natural closure about here is without avail, and the only resort for improving the hearing and protecting the middle ear is the artificial drumhead. The majority of perforations, though, are the concentric or excentric ones, either single or double, or more numerous—and the more, and consequently the smaller, the more tractable they are. As the supreme question always will be, whether the hearing will be benefited by a closure, the artificial drumhead is applied as a test. For this purpose it is sufficient to apply a small cotton pellet in the opening, or—what is better still—a small piece of sticking plaster over the opening in the membrane. If by this the hearing is improved, there is no doubt about the benefit to be derived from a natural closing, but if the hearing is not improved we are not so certain of the reverse. Politzer, and many other authorities have laid down this rule. It must be taken with some allowance, as the result must depend on other circumstances, as, for instance, the duration of the existing opening and the possible changes in the middle ear. So also as to the question of seeking a closing where the artificial drumhead produces noises in the ear. It is very well for a text-book, but only there.

There is so much difference between an artificial drumhead and a natural closure, that results obtained by the first are not to be compared with those obtained by a natural closure, because only under this can the tympanic cavity with its mucous lining and chain of ossicles return to the same condition it had before the primary lesion took place. The artificial drumhead is a foreign body, whose irritating and pressing effect is too predominating to give us any correct idea as to the final effect of a closing. It is not out of place either to assume that a direct treatment of the tympanic cavity through the opening will and can do much good, while the closing goes on, if proper remedies are employed. If ill effects are obtained after the closing, as, for instance, impairment of hearing and noises that were formerly not present, the after-treatment will have to be directed through the Eustachian tube, with injection of proper medicines, or resort can be had to surgical interference to bring about a permanent opening again. In cicatricial tissue this is not a very hard task. But I must say right here that it is not likely that we will have to resort to these things if the first testing with closing the opening is carefully made. For this purpose I must recommend the sticking plaster again, as being more reliable than the cotton pellet, or what is generally understood by the artificial drumhead.

If a considerable improvement of the

hearing be produced by covering the entire opening with sticking plaster, my proceeding is as follows. The whole ear is first thoroughly cleansed with a Listerine solution, and dried with borated cotton. After this I apply a 5 or 10 per cent. solution of cocaine, and let it remain in the ear for some minutes, after which I apply the borated cotton again to dry up the whole meatus. Next I put a cotton plug, corresponding to the size of the opening, inside of this, to protect the inner wall of the tympanic cavity, and apply the galvano-cautery burner to the inner edge of the opening, only slightly, so as to cause a superficial eschar. This done, I remove the cotton plug and apply another soaked in glycerine and dusted with iodoform powder, on the opening. Outside of this I apply a piece of oiled silk, and cover the whole with borated cotton to make it all air-tight and, so far as possible, aseptic. By this packing, the membrane is continually kept in a warm, moist condition, which is of paramount importance, if we want a rapid healing to take place. This proceeding is repeated once a week until the opening is closed. Sometimes it is well to stop for a while and then take the treatment up again.

In some cases I have tried chloride of zinc and argentum nitricum, but the best and quickest results I have obtained with the galvano-cautery. Of course, it is to be used with care, so as not to produce a larger opening, and it must, therefore, not be applied again until reaction has ceased. If, by these means, closure cannot be obtained, then we must look for hindrances elsewhere. It is quite frequent that the manubrium mallei is drawn inwards on account of the weaker resistance of the perforated drumhead, or there is somewhere adhesion between the edge of the opening and the inner wall. In the first case, I divide the tensor tympani, so as to bring about relaxation of the drumhead, and in the other case I separate the adhesion and apply a piece of iodoformed cotton, to prevent renewed adhesion. It might be inferred that this procedure is not without its risks. I can only say that I have never met with any unpleasant effects from it, although I have practiced it for many years.

My excuse for bringing this view of mine to the notice of the profession must be sought for in the fact that what I regard as an easy affair, is generally considered by the medical profession as unobtainable. As a rule, an old perforation of the drumhead is considered a final condition, and, therefore, it is left to the patient to find out for himself whether an artificial drumhead gives him any benefit or not. It may be that the patient falls an easy prey to the vendor of rubber drums, but the medical profession cannot regard this as a final victory. If the artificial drumhead would compare, for instance, with the correcting glass for a disturbed vision, it might rightly be suggested to let well enough alone; but there is no comparison, as the artificial drumhead sometimes endangers life, which the glass does not. Very often an acute otitis media sets in, produced by applying a soiled drumhead to such a delicate part as the tympanic cavity. Patients who are compelled to wear it for the sake of improving their hearing, may be ever so scrupulous in cleanliness, it cannot help but that some harm may be effected, because it concerns a locality which is not open to investigation and self-control, and we know for a certainty that it is never aseptic. Ignorance is bliss here, and has its analogy in the utter carelessness that is manifested by the laity in using the ear as a receptacle for almost anything with which to relieve an earache or the like. Resorting to the artificial drumhead as the *ultimum refugium*, puts a stop to further investigation as to altered conditions of the ear, brought about either contemporary with or after the primary lesion took place. By trying to close the perforation, we may probably do more good than the artificial drumhead can ever accomplish.

Last, but not least, there are a large number of our patients who, for the reason above mentioned, cannot and ought not use the artificial drumhead at all. I mean, children. To them it is an annoyance more than a benefit, and is, therefore, not much appreciated. The above mentioned lack of control makes the use of it especially dangerous in children, not only from their carelessness, but also from the weaker resistance to irritation in the tissues of a child's ear.

To prevent any misunderstandings, allow me to say that only perforations as sequelæ to an inflammation in the membrane proper, or in the tympanic cavity, are thought of, and not deeper or more serious lesions with destruction of the hearing bones, in which closing the aperture would only protect the middle ear, and would rather impair than improve the hearing.

CORYZA.[1]

BY G. P. SARGENT, M. D.,

BRYN MAWR, PA.

Coryza is perhaps the most common affection from which we suffer, and the disorder itself and its accompanying ills are so distressing at times as to call for preventive and remedial treatment. It is an acute inflammation of the nasal mucous membrane, and is held by some to be synonymous with nasal catarrh; but I look upon catarrh as a more deeply seated disorder or at least an advanced stage of this "cold in the head"—this nasal blenorrhœa.

It is commonly caused by a check of perspiration, or when there is no perspiration it is often induced by a current of cold air—not infrequently by inhaling cold air, as when one faces a sharp cold wind while driving. Cold feet and hands give rise to it at times, and a writer, in a well-digested article in *Chambers' Journal*, some time since, attributed many cases to a nervous disturbance. His paper was entitled: "The Nervous Origin of Colds," and in it he enlarged upon the fact that local irritation of nerves at the seat of the trouble or situated at a distance and acting by reflex influence, often produced coryza; and also upon the fact that it followed emotional excitement in some persons. Irritating vapors and dust frequently provoke an attack. A strumous constitution is especially susceptible; and there may be in some a hereditary predisposition. It is often present in measles and shows itself perhaps in its most formidable character in influenza. It may be epidemic; though it is not considered contagious.

The onset of the disorder is usually characterized by a sense of dryness of the nostril, with tickling and a great propensity to sneeze. The temperature of the mucous surface is reduced, to be subsequently elevated above the normal standard. The dryness and tickling are soon followed by a full flow of mucus. The engorgement is rapidly increased, and serum exudes, gradually becoming thick by the breaking down of epithelial cells and lymph corpuscles. There is a fulness of the head and dull and oppressive pain along the frontal sinus. The nerves of the region most affected being numerous and highly sensitive, the irritation, itching, sneezing and general discomfort become at times almost unbearable. In severe cases the eyes become suffused, the tear ducts are occluded, and smell and hearing are much impaired. In yet severer cases, as in hay-fever and influenza, the eyes become swollen and the skin of the upper lip and around the nose and eyes even sore from the irritation of the mucous discharge.

This is a most uncomfortable state of things, and one who suffers a severe attack is in a pitiable condition. Happily the disorder passes away in most instances in a few days, even without treatment, and thousands of patients pass through the several stages without check and without medical advice.

But, unfortunately, many apparent recoveries are only partial, and the inflammation is revived by a slight provocation, establishing a chronic catarrh, which every one knows is an obstinate, persistent and deplorable evil, interfering seriously with the entrance of pure air, and leading to debility, and either directly or indirectly to disease of various organs, and greatly vitiating the general tone of the system.

It is especially in hope of averting so serious a disorder as chronic catarrh that coryza should be treated at an early stage; since one who has suffered an attack and allowed it to take its course is more liable to suffer again, and by frequent visitations becomes debilitated and a prey to other forms of disease. For how can the blood be properly aerated if the breathing be interfered with?

We are not often called upon to give advice in cases of simple colds, the popular belief being that there is no way of cutting short an attack, and that it must have its course of a week or ten days. There are, however, remedies which, if employed early, relieve in a night eight cases out of ten. Dr. Ferrier, of London, devised a snuff composed as follows:

℞ Bismuth subnitrat. . . . . ʒvi
Morphinæ hydrochloratis . . . . . gr. ii
Gum. acaciæ . . . . . ℈ii

This is mixed and reduced to a fine powder, and one-fourth is used in a day.

I think it would be improved if the acacia were left out. It might be further improved by adding a grain or two of aristol; but this is more especially suitable for use in the chronic trouble. Sidney Ringer thinks arsenic very useful when sneezing is a prominent symptom in coryza. It is certainly use-

[1] Read before the Medical Society of Montgomery County, Pa.

ful at a later stage, and as a tonic; and atropia or belladonna is a good substitute as a remedy for this symptom, acting more quickly.

The following formula is excellent.

℞ Quininæ bisulph. . . . . gr. xxx
Ext. belladonnæ
Ext nucis vom.
Ext. aconit . . . . . aā gr. iv
Acid. arsenio. si. . . . . gr. ss

M. Et. ft. pil. No. xxx. Sig. One pill every four hours.

Another similar prescription is this:

℞ Quininæ sulph. . . . . gr. xviii
Liq. potass. arsenitis . . . . . ♏ xii
Liq. atropinæ . . . . . ♏ i
Ext. gentianæ . . . . . ℈ i

M. ft. pil. No. xii. Sig. One pill every three, four or six hours.

In my own practice, I give at once morphia and atropia, making from one to twenty-four doses out of what is called a tablet triturate, now made by many druggists, containing one-sixth grain of morphia and one-one-hundred-and-eightieth grain of atropia, dissolving it in water—a dose every half hour, if required, according to the age of the patient and the stage of the disorder. The atropia counteracts any ill effect of the morphia, and usually prevents headache. It also tends to diminish the secretion of mucus very decidedly. Both together diminish the irritation, and calm the nervous disturbance.

Should headache arise from the morphia or otherwise, a cathartic may be required. This should be one that is speedy in its action, such as a Seidlitz powder, or the headache may be relieved by caffeine—notably with bromo-caffeine.

If a case of coryza presents itself at a later stage, when the mucous secretion has become thickened or dry, I have found a spray of equal parts of glycerine and rose-water useful, to thin the secretion, the spray being thrown into the nostrils at frequent intervals. Glycerine with spirits of camphor is also useful, introduced by means of a quill brush, as it does not mix well enough to be easily applied with an atomizer.

With the morphia and atropia for the first medication, and with the pills of quinine, arsenic and belladonna for later treatment, nearly all cases of simple coryza will be found to yield in a day or two; and these remedies may be placed within easy reach of persons subject to frequent attacks, and much trouble and subsequent disease will be averted.

VOMITING OF PREGNANCY.

BY ENOS T. BLACKWELL, M. D.,
CEDARVILLE, N. J.

Puerperal vomiting, when severe and protracted, tests to the utmost the endurance as well as the patience of the sufferer. She is obliged to bear not only the inexpressible horrors of the deathly nausea, but also the experiences and prescriptions of all her female friends. The domestic pharmacopœia exhausted, she may learn that the disheartening and weakening things she endures have been declared on high authority to be extremely beneficial to her, looking to the conclusion of her gestation. The suffering woman, who "beareth all things, hopeth all things, endureth all things," accepts the promised boon with such philosophy as she can muster; and may prove its truth or falsity, if she survive the dreadful loss of strength which attends the continuous and exhaustive vomiting, and the malnutrition which results; but the physician who is called on for relief should look beyond the phenomena exhibited by the stomach, and not content himself by attempting to placate that organ through remedies applied to it alone.

The reflex symptoms, which radiate from the pregnant womb, and which are largely due to conditions affecting its inner structure, may also originate from causes situated upon its exterior. Should the practitioner fail, in a rebellious case, to inspect the neck of the uterus, he might, while discoursing learnedly on the impossibility of removing the cause without destroying the fruit of the womb, and while devotedly applying remedies to the apparent seat of the difficulty, namely, the stomach, overlook a patent cause that admits of cure, both signal and speedy. If we are able to locate a cause upon the exterior of the uterus which is easy of access, and which may be successfully combated by remedies acting on well-known principles, we shall pursue a more scientific and rational method than if, satisfied of the internal origin of the reflex action, we try in succession the various drugs recommended, which are largely empirical.

Dr. Llewellyn Eliot, of Washington, D. C., whose therapeutic resources have apparently been directed to the effects of the uterine irritation as exhibited in the stomach (Reporter, October 8, 1890), rather than to the cause, which may sometimes be sit-

uated at the cervix uteri, and in given cases may be seen by means of a vaginal examination, brings forward a number of cases in support of the internal use of tincture iodi, a remedy recommended by Prof. Laségue, and tested and endorsed by M. Darthier (REPORTER, February 8, 1890, from *L'Union Medicale*). This appears to be an excellent remedy for many cases, but time should not be lost with temporizing measures, and the patient allowed to drift into extremity before an attempt is made to allay the reflex symptoms by local applications to the neck of the uterus. Medicine by the stomach may be continued, if thought advisable. Two cases have come under my observation which illustrate and emphasize this view.

Case 1. March 4, 1886. Mrs. ——, 28 years old, married, and one month advanced in her fifth pregnancy, had had almost constant vomiting from the date of conception. Her experience in all her former pregnancies had been ceaseless vomiting for the first three months, and excessive salivation. She had been promised by her last accoucheur that relief would be afforded her in any forthcoming trouble of that kind. As related to me, I judged that the relief was to be obtained by destroying the fruit of conception. The husband, who called me, hinted at this procedure. I found the patient in an extremely discontented, despondent, and rather savage disposition. She was most forlorn from the incessant vomiting, and greatly dispirited because of lack of sympathy, and of any expectation of help. Her mental alienation and dislike of her husband were complete, and she abhorred his approach. I presented the claims of the intra-vaginal treatment as brought forward by Dr. J. M. Halbert, of Skipworth, Miss. (*Medical Bulletin*, Vol. v, p. 105), consisting of iodide of phenol, or nitrate of silver, fifty grains to an ounce of water, applied to the neck of the uterus. Being in despair, she was ready for any procedure that gave prospect of relief. Examining through the speculum, I found an erosion the size of a nickel five-cent piece upon one side of the cervix uteri, and applied the silver solution in the strength directed by Dr. Halbert. Very great benefit followed the first application. Two days later, the erosion was again cauterized, and cocaine, which had been found successful by Dr. Wm. Duncan in like cases (REPORTER, Vol. lvii, p. 65, from the *Lancet*), was also applied to the abrasion. By March 10, six days from commencing treatment, the recovery was so great that she took a journey to a city ten miles away. The silver solution was reapplied on March 18, and on March 25—four applications in all. From this time the stomach resumed its healthful condition, the gestation being normal to the end.

November 22, 1890, I called upon this woman, whom I had not seen since attending her for the vomiting, four years and a half before. She informed me that she again became pregnant a year ago last March, and that the vomiting commenced immediately, with its accustomed atrocity. Her physician, it seems, had no knowledge of topical applications for subduing this horrible and rebellious infliction. The stomach, therefore, had to endure a round of remedies wondrous in their variety, but alike inefficient. For two months she was confined to her bed, and recovered only when the usual immunity succeeded at the end of three months.

Case 2. July 27, 1889. Mrs. McP., a young primipara, applied for treatment for puerperal vomiting. She was given the following:

℞ Potassii iodidi . . . . . ʒij
Aquæ . . . . . f℥iv

M. Sig. A teaspoonful in hot water, every few hours.

She was commended to pop-corn, and also, I think, to buttermilk, which figure in the list of empirical remedies. No relief having occurred, on August 2, I applied the vaginal speculum, and discovered an erosion similar to that in Case 1. An application of the silver solution, fifty grains to an ounce of water, having been made, great amendment promptly followed. So complete was the amelioration, that the patient did not desire further help. Before the month closed a diarrhœa came on, which resisted ordinary remedies, and persisted to the end of the gestation. Whether this was due to uterine irritation transmitted to the bowels, I know not. Its intractability would seem to indicate this.

She did, indeed, *think* that she had received some advantage from cocaine taken by the mouth; but, as its use was persisted in until the cocaine habit was formed, it is quite improbable that any benefit was derived from it sufficient to compensate for the danger incurred.

New York Correspondence.

NEW YORK LETTER.

Contribution to the Pathology of Reynaud's Disease.—Removal of Hypertrophied Prostate.— Trephining for Epilepsy. — Total Extirpation of the Larynx. — Artificial Larynx.—Remarkable Case of Luxation of the Patella.—Chronic Cervical Adenitis in Children.

The holidays and the electing of presiding officers for the year, have somewhat hampered the scientific work at the New York Academy of Medicine. As of general interest in New York, however, since last report, may be mentioned a contribution to the pathology of Reynaud's disease, by Dr. G. W. Jacobus, read before the New York Neurological Society. He said that although a great deal had been written upon the subject of local asphyxia and symmetrical gangrene since Reynaud first drew attention to this disease, and very many new cases of the affection had been described, the knowledge at the present time of all of its features, except, perhaps, the purely clinical ones, was hardly any more advanced than it was at the time of Reynaud's writing. Etiologically we had in a certain sense made some progress, for now we realized that other causes than those which Reynaud believed to be the only admissible ones, might have a supplementary productive action. As it was recognized that the symptoms of local asphyxia and symmetrical gangrene were often due to unrecognizable states of disordered blood mixture, the author simply touched upon this point. He said that upon the question of anatomical nerve disease as a cause of symmetrical gangrene there could not be any uncertainty. That the nerves did exert a certain amount of influence upon the production of gangrene, either indirectly by affecting a contraction of the vessels, and thus suppressing the nutrition of the part (Reynaud) or by producing it independently of the vascular system, could not be denied. According to the assertions of Quesnay, section of the nerves was said to produce gangrene of those parts in which they took their course. This assertion had been made repeatedly since then, but the proofs were wanting on account of the impossibility of completely cutting through all the nerves of a part and leaving the arteries uninjured. On the other hand a clinical proof of this dependence was found in the fact that gangrene of an extremity occurred, after ligature of an artery, more easily if the nerve had been injured than if this was not the case. As stated, in order to make a diagnosis of symmetrical gangrene in Reynaud's sense, we must be able to exclude gross nerve disease. This could not be done in many cases. The class of cases which the speaker dealt with were those which came under the caption of gangrene, due to pathological changes in the blood-vessels. It was a *sine qua non* for the diagnosis of Reynaud's disease that the lumen of the vessels should be free, and that their walls should be found in a healthy condition, so that vascular disease might anatomically be excluded as a causal agency in the production of this affection. If, with this in mind, we reviewed the various cases reported, we should find that although pathological examinations had not been frequently made, still in a number of cases in which this had been done, the condition of the arteries did not fulfill the required obligations. All cases of spontaneous gangrene, symmetrical or unilateral, would require careful attention and examination. In many cases we would be able to discover some local change in the arteries of the affected parts, while in others some general affection of the arterial system would explain the gangrene. Many cases would, however, always remain in which, no matter how careful the examination, no such explanatory conditions could be detected. There were still other cases, which in view of the fact that many of the so-called cases of Reynaud's disease were not symmetrical, and might be ascribed to nerve influence, which were better explained by the assumption of an obliterative endarteritis. It was well known that syphilis produced upon the arteries a periarteritis which gradually encroached upon their entire diameter, finishing as an endarteritis and thus narrowing or even totally obliterating the caliber of the vessel. It was also well known that many cases of spontaneous gangrene, resembling Reynaud's disease in every particular, were often due to such affection of the arteries. What was known about the symptomatology of syphilitic affections of the superficial arteries, as revealed by a study of the few published cases, was as follows: Two phases of the pathological changes found a clinical expression, and obliged us to differentiate a stage of induration, with preservation of the lumen of the artery, and one of obliteration

of the artery with all its consequences. In the obliterative stage we had symptoms of ischæmia progressing in extent according to the seat of the affected arteries and according to the difficulty encountered in the establishment of the collateral circulation; if the terminal arteries of the extremities were affected, the disorders would be very marked, consisting in œdema, slight syanosis, reduction of temperature, and finally we might also have gangrene of the parts. If, however, small arteries were affected whose collateral ramifications could be replaced, then the symptoms would be transient or entirely wanting. From a consideration of the various data; from the nephritic as well as from the syphilitic cases; we were unavoidably forced to the conclusion that those authors who admitted that an affection of the small arteries, be this artaritis obliterans or other change, did produce a similar clinical picture to that found in Reynaud's disease, herein were right, but that these same authors were wrong when they contended that a differential diagnosis between the two affections could always be made. The points which were adduced by the various writers for the purpose of making this differential diagnosis were the following: Gangrene occurred in some cases of Reynaud's disease in places where endarteritis obliterans had thus far never been described. The lesion in many cases of Reynaud's disease was confined to the superficial layers of the cutis, and this never occurred in endarteritis obliterans; the absence of those etiological movements which produced vascular disease, as syphilis, absence of all palpable anatomical changes in the vessels; and finally, the occurrence of symmetrical gangrene in neuropathic individuals only. That these points were invalid and some of them erroneous became clear when we considered that it was probable that arteritis obliterans occurred in the vessels of the skin, a condition which had been pointed out by Klotz and Hutchinson. From these facts we were justified in concluding that the differential diagnosis between Reynaud's disease and anatomical disease of the arteries could, in many cases, not be made intravitam, or in other words, many of so-called Reynaud's disease were really cases of arteritis.

Before the Surgical Section, Dr. R. F. Weir showed a middle-aged man from whom he had removed a hypertrophied median lobe of the prostate gland. The patient had been for a long time in the habit of using a catheter, which had at length broken, leaving a portion of it in the bladder. Symptoms of stone had subsequently developed, for which the speaker had performed supra-pubic section, and had extracted from the bladder a good-sized stone, of which the broken catheter had formed the nucleus. On illuminating the interior of the bladder he had discovered a projection enlargement of the prostate gland which he had removed. The resulting hemorrhage had been checked by lessening the pressure of the water bag distending the rectum. The bladder was then packed with iodoform gauze. The case had gone on to a complete and satisfactory recovery, with entire restoration of the normal functions of the part. In the event of his having to do this operation again he should make use of the tonsillotome in preference to any other cutting instrument, in removing the glandular enlargement.

Dr. A. P. Gerster said that it was not always the cases of operative interference of the prostate gland which were as successful in their issue as that reported by Dr. Weir. Half the patients in whom the middle lobe was removed did not recover to such a degree. This was due to the fact that the contractile powers of the bladder were gone. The removal of the lobe could not restore the muscle. The operation was not always a proper one, and great judgment was called for in the proper selection of suitable cases.

Dr. Weir also presented a man fifty years of age, who had suffered for a number of years with frequently recurring epileptic attacks, resulting from a depressed fracture of the skull. A primary operation had been performed which had been of direct benefit, but as the patient complained of constant pain, a second one was undertaken, in which a very extensive flap was raised, and three buttons of bone removed. These were replaced and the interstices filled with bone chippings. The result of this part of the procedure was good, firm union with the exception of a small point of softening at which pulsation could be felt. The epileptic seizures had been reduced from several each day to about one a month, and the patient was able to attend to his business. This was the usual outcome of all operations for epilepsy of this character, improvement might be looked for, but very seldom cure.

Dr. Robert Abbe thought in the class of epilepsy to which reference had been made repeated trephining was likely to be of direct benefit. He had operated upon a case

about a year ago and had relieved the patient from an impending condition of insanity in which there had been half a dozen maniacal seizures a day. It had been six months before a recurrence had taken place. The patient was then put in an asylum. Repeated operation might have been of signal utility in this case.

Dr. Willy Meyer exhibited a patient sixty-five years old, upon whom he had recently operated, removing the entire larynx, for epitheliomatous growth. The man was now wearing one of Gussenbauer's artificial larynx tubes. As this had only been in place fourteen days, the patient, although already able to articulate and make himself understood, could not do so as well as he undoubtedly would, by reason of the non-closure at present of a small part around the tube, with some escape of air. The speaker thought that the larynx he had adjusted would amply meet the needs of a patient of this age.

Dr. Townsend then presented quite a remarkable case. He placed a young colored girl in a chair upon the platform and baring her left knee he stated that she had suffered from what was said to be congenital dislocation of the patella of that joint. As she grew up the patella would become spontaneously dislocated either on one side or the other whenever she attempted to run. But this was not all, she was capable also of causing dislocation by voluntary muscular effort. As she had been for some time under treatment this power was lost as to the inner side. He then directed the girl to effect the dislocation, when to the astonishment of everybody, and apparently without the slightest effort, she shot the patella to the outer side of the joint, bringing it back into position, repeating the performance at will.

Before the General Session, Dr. A. Jacobi, in a paper on chronic cervical adenitis in children, said that the frequency of the morbid changes in the lymphytics was explained by the large amount of cells which formed the bulk of their structure. They were still similar to the embryonic cells, increasing and proliferating as rapidly. Therefore, tumefactions were brought about very readily. As an intricate network of blood-vessels penetrated their follicular substance, they might undergo morbid changes through the intervention of the blood. When the latter was the cause of disease, the whole system of lymphatics was likely to be affected simultaneously. This was, however, rare. In the majority of cases only groups of lymphatics, or single lymph bodies, were affected. The cause of the disease must be looked for in the circulating lymph which, both in normal and abnormal circumstances, was retained and filtered in the lymphatics. These were not open tubes, but a fine network of cavities lined with endothelium. Foreign bodies of any description floating in the lymph were there retained and underwent changes. There were also chemical changes in the lymph itself which would irritate the lymph body and provoke disease. Thus it was that most of the morbid changes of the lymphatics were secondary in character. Such changes were almost always the result of, or complicated with hyperæmia and inflammation. The lymphoid cell constituents increased in different ways. Leucocytes were retained in large numbers, lymph-cells floated in, a subdivision took place, and the endothelia and cells were changed into similar or equal organic particles.

This condition might undergo restitution, or a lymphatic induration might take place through nucleæ proliferation in the stroma, and again suppuration or necrosis might occur. The fibrous induration was the more frequently met with in the bronchial, tracheal, mesenteric, axillary and inguinal glands than in the cervical. In the inguinal it was very common and was frequently met with in this region without any morbid symptoms. This change exhibited often a chronic character from the beginning. The glands were not always enlarged, but were white and hard on section, with thickened capsule, the cellular substance seemed to be diminished and the gland appeared to consist more or less of connective tissue only.

The suppurative change might be confined to the gland, at least temporarily, or the neighboring tissues participate in the process at an early period. Small abcesses originated mostly in the follicular substance, might prove confluent so as to form larger abscesses and finally burst or were incised. Recovery took place by a shrinking process, by cicatrization, by the formation, when the larger lymphatics were injured, of a fistula, sometimes accompanied with lymphorrhœa, or by dessication, or caseation, or calorification. This was the second form of chronicity. The third form of chronic adenitis was the caseous, which generally occurred under the influence of scrofulous

or tuberculous predisposition. It was usually found in the cervical, bronchial and mesenteric glands.

General infection of the glandular system might act through the blood as in any putrid and septic invasion, in anthrax, lepra, leucocythemia and pseudo-leucocythemia, under the influence of Koch's lymph, in syphilis, and in enteric fever. In the two latter, the local irritation resulted in local glandular affection, by preference. Still more local was the action of the diphtheritic virus. The majority of cases of adenitis owed their existence to a local influence. In many instances the study of the origin was single, in others, particularly in cases of long duration, the connection of chronic adenitis with its original source was no longer traceable. In a child, therefore, of advanced years, and the adult, the history of chronic cervical tumefaction might be quite obscure, in the infant and young child the elucidation of the etiology was generally simple. The best protection against adenitis in any of its forms was the preservation of good general health and the absence of any breaks in the integument. Traumatisms, insect bites, erysipelas, and so on would start an adenitis directly. Pediculi, eczema, or impetigo capitis would do the same thing, heal these, and, contrary to the public prejudice, most of the glandular noduli and nodi would disappear. Among other common causes given by the speaker were many of the ear and eye troubles, various forms of zoster, fever blisters and so on. Any condition interfering with the healthy state of the mucous membrane might give rise to adenitis. This was especially true with regard to the nose and naso-pharynx. Boring at the nose, from reflex intestinal irritation by worms, was likely to set up a chronic adenitis. Simple douches of salt and water were the best treatment for these nasal irritations. There was no better illustration of the way an adenitis would come and go in the presence of proper treatment than in nasal diphtheria. As fast as the glands swelled, just so rapidly would they diminish under the influence of cleanliness and disinfection, while, if not so reduced, their infection would lead to death or chronic changes. Cracked lips permitted the invasion of microbes and the development of adenitis. Epithelioma, stomatitis of every form, the denuding of the surface by a burn, or by hot food, were all causative. Abrasions of the surface of the tongue through catarrh or inflammation, or the surface lesions of infectious diseases might all provoke adenitis. Drugs would also produce the same effect. Chronic bronchitis resulted in swelling of the mediastinal glands; their intimate connection with the lower tier of the cervical affected these. This observation could be made in the chronic bronchitides of the tubercular and rachitic babies in many instances. Acute pulmonary diseases exhibited similar results. The vaso-motor changes of the face, its flush lasting for days, generally unilateral, on the side of an acute pneumonia were well known, not so commonly known, however, as the tumefaction, of cervical glands in cases of pleuro-pneumonia of the upper lobe. This disease had an immediate influence upon the intra-thoracic lymph-bodies adjacent to the apices, and through them on the subadjacent cervical lymph-bodies.

While touching upon the question of diagnosis, the speaker said that the sensation of fluctuation in glandular swellings was often misleading. Large glands might be mistaken for sarcomata and *vice versa.* These latter pseudoplasms yielded a peculiar apparent fluctuation, though there might be no cystic complication. This semi-fluctuation was almost characteristic for sarcomata in every region. It was always a difficult thing to determine the presence of pus during the stages of initial softening. Still less was there absolute certainty in every case of the presence or absence of a malignant nature in a large glandular swelling. This difficulty was made very apparent by the variety in the morphological diagnosis by the morphologists. The gradual increase in size, however, of a tumor, without softening, spoke for the probable malignancy of the growth. The presence of more swellings of the same character on other parts of the body, might prove the existence of Hodgkin's pseudo-leucocythemia, and the same with enlargement of the spleen or liver and the characteristic changes in the blood might indicate leucocythemia.

—At the Eiffel tower a steel ball weighing 211 pounds is, by a bronze wire 380 feet long, suspended from the second platform, and allowed to swing near a layer of sand. Under the ball is a style tracing a mark in sand at each oscillation. The apparatus serves as a popular demonstration of the earth's rotation.

PERISCOPE.

Simple Medication for Children.

Under this title Dr. Charles Warrington Earle, of Chicago, made some admirable remarks at the meeting of the American Pediatric Society last year. From the report of his paper in the *Archives of Pediatrics*, January, 1891, the following extracts are presented.

I believe in medication always, when needed, but at the same time belong to that class of physicians who believe it quite as much my duty to say to people, "You need no medicine whatever," if such be the case, as to prescribe a heroic dose when it is indicated. When, however, good diet, a better hygiene, more air and sunlight will not suffice to save, and it is necessary to give medicine, we owe it to our patients, especially our little patients, to prescribe a drug or drugs so that they shall be cured not only quickly and safely, but, if possible, pleasantly.

In the first place, many cases to which we are called need no medication whatever; that is especially true of first visits. There is a little irritative fever, a slight indigestion, a trifling nervousness, a few more bowel movements than usual, or the mother simply imagines in her solicitude that the baby is threatened with something. Many conditions similar to these are frequently seen, and they will recover—correct themselves without medicine; indeed, better without than with medicine. The diagnosis is frequently made by a parent, and the doctor is summoned to prescribe for a fever or for malaria, or for worms, and before he sees the little patient he has devised a combination of drugs for it. Something to reduce the pulse; to correct the secretions; something to regulate the excretions. How much better it would be for this little one to give it nothing, for in many cases the patient will be entirely well in a few hours.

I do not advise against the administration of medicines when they are indicated; I know that by the judicious use of a drug, or drugs, diseases may be modified, a convulsion possibly averted. But the indication for its use should be clear—we should not give a drug simply to make a show of prescribing.

In the second place, when a single drug is indicated, we find in many cases too many prescribed, and a child's appetite destroyed and its nutrition impaired by the procedure. This does not apply to diphtheria, or any other disease which, at times, is local, and should be combated with vigor and promptness and frequency in order to keep it from becoming a general disease; but it does apply to that vast category of complaints where it is absolutely necessary to improve nutrition.

Again, take the eruptive fevers during the first stage: why give a little aconite or belladonna to reduce the fever? We want some fever; we all prefer a temperature of 102° to one at 98°. Why unload the portal circulation and, in so doing, probably irritate to a greater degree the already irritated mucous membrane of the alimentary canal? Look out for the throat in scarlet fever, which here will give more trouble than any other organ (excepting possibly the kidneys), and for the lungs in measles. This should, it occurs to me, be the rule in general. Do not waste time and annoy the patient by doctoring a symptom; attack the disease.

And then in convalescence—how much it is retarded by the reckless administration of drugs. After a baby has passed through a fever, or some disease of the lungs, it does not need something to act on its liver or kidneys, or to clear up its tongue which is quite frequently normal when a little coated, or some alkali to correct a fancied acidity; but it does need something to eat, and it can't eat as long as the stomach is filled with nauseous medicines. This condition is well illustrated by a case I saw late in the year 1889. The child, around whom all the love and devotion and nonsense of a young father and mother clustered, had the "grippe." Its temperature had been rather high and the bronchial catarrh really severe. The attending doctor had diagnosticated pneumonia, and for this I was summoned. After a few days it began to convalesce, and I left it with the understanding that some restorative medicines, probably the hypophosphites with a little pepsin and possibly a minute dose of tincture of nux vomica, was to be administered. In two days I was recalled and was informed that the appetite was poor, the pupils dilated, the head was being thrown from side to side, and the doctor and parents were sure that cerebral congestion, if not meningitis, was present. By actual count that child was taking nine different drugs, hardly one of which was indicated. It was having bicarbonate of sodium, iodide of potassium, muriate of ammonia, tincture of aconite,

tincture of belladonna, tincture of camphor, and a little opium, submuriate of hydrargyrum, to which should be added camphorated oil externally, supplemented and strengthened by a plaster of belladonna ointment. Is it any wonder that that child could not eat, that its pupils were dilated? The wonder to me is that it was alive. I solemnly declare that I have been more alarmed for fear that some doctors would kill their little patients with drugs than that the cases would terminate fatally from the disease.

We now come to pleasant medication. Of course, this is not, by any means, an easy task; sometimes it is impossible without sacrificing the usefulness of the drug. With care, however, we can do much; we can avoid prescribing large mixtures, can stop giving tablespoonful doses, and, in many instances, give our tinctures in water. Happily the custom of ordering four, six and eight ounce bottles of medicine has nearly ceased. It should be stopped entirely, except in those cases where tonics and cough-mixtures are given, when it is necessary to see a patient but seldom. In acute sickness it is usually quite all that is needed to prescribe one-ounce and occasionally two-ounce mixtures. In the administration of most of the tinctures, particularly aconite, veratrum, digitalis, as well as Fowler's solution, etc., where the dose is from a fraction of a drop to one or two drops, it is best for the young physician to carry the drug and measure out enough at each visit for the coming twenty-four hours. This gives a pleasant medicine, and it is also economical, and to young practitioners it is a custom which will make them friends. It is good practice, too, for physicians to always be ready to give the first dose of medicine; it may not be much, but it convinces the people that you are ready for emergencies; this I say more particularly to those young in the profession.

With a little care we can treat a case running through several days, if not weeks, with but little display of drugs. Nothing makes the people appreciate the expensiveness of a doctor so much as, at the end of two weeks' sickness, having a tableful of bottles partly emptied. And nothing disgusts the patient to such an extent as to witness the doctor every morning commence to write his usual two or three new prescriptions; a part only, at most, will be taken, the remainder to go to make up the tableful, which is to be removed at the conclusion of the sickness.

Detection of Biliary Matter in Urine.

The American Druggist, December, 1890, says that according to Dr. Adolph Jolles, of Vienna, who has made a comparative study of the various bile reactions so far proposed, the most reliable tests are those proposed by Rosenbach and by Huppert. Rosenbach's test is as follows: A piece of filtering paper is wetted with the filtered urine, and a drop of nitric acid then applied to it. Colored rings will form about the drop of acid.

Huppert's test: Precipitate the urine with milk of lime. Exhaust the precipitate with alcohol containing sulphuric acid, and apply heat. A green color is developed.

Dr. Jolles has found that both tests are capable of improvement. In the case of Rosenbach's he recommends the following modification: Filter a large quantity of the urine to be tested through pure, white filtering paper, then apply to the inside of the filter a drop of concentrated nitric acid containing some nitrous acid, and slowly pass the funnel containing the filter three or four times over a Bunsen burner. After a few minutes observe the rings which will have formed around the drop. If they are colored green, bile pigments are present. The application of a gentle heat reveals even traces of these pigments. The bright-green ring shows the presence of biliverdin.

The reliability of Huppert' test depends mainly upon the strength of the milk of lime. As the author of the test failed to specify it, Dr. Jolles made experiments, and found that the most suitable strength was about 1 per cent—that is, a milk of lime containing about 10 grams of lime in the liter of water. The test is best performed as follows:

About 8 to 10 c.c. of the urine are mixed with an equal volume of the milk of lime, the mixture is shaken, and the precipitate separated by filtration.

So far the *American Druggist* describes the test correctly. For the rest, we give the statement to the REPORTER of Dr. John Marshall, of the University of Pennsylvania. Dr. Marshall says:

"The precipitate from icteric urine is yellow, from normal urine it is white; and from urine containing chrysophanic acid, it is rose-red. The precipitate is now placed in a beaker and boiled with alcohol containing a couple of drops of dilute sulphuric acid, and then the mixture is filtered. In case biliary coloring matter is present, a

beautiful green coloration is imparted to the liquid; while from normal urine the liquid remains colorless and in the presence of chrysophanic acid it becomes orange-yellow."

Leprosy in Colombia.

An official report on the rapid spread of this disease is contained in a recent number of the *Revista de Higiene de Bogotá*. It is the result of systematic medical inquiries throughout the Republic regarding the causes and phenomena of the disease by the Central Junta of Hygiene of Colombia. The propositions of this medical commission are of interest in respect of the primary steps of relief that will be recommended to the executive and legislative departments of the government: 1. To solicit the next Congress to pass a law providing for the isolation of individuals affected with leprosy and elephantiasis. 2. To establish a special tax to defray the expense of observing the method of propagation of the disease and for the erection and maintenance of lazarettos; and to include this tax in the central budget of the government. — *New York Medical Journal*, December 6, 1890.

Sunflower Plantations as a Prophylactic against Malaria.

In the *Vestnik Obshtchestvennoi Highieny, Südebnoi i Praktitcheskoi Meditziny*, September, 1890, p. 104, Dr. I. D. Imüidzinovitch, of Kopal, Semïretchïë, issues an emphatic appeal in favor of an extensive cultivation of the sunflower (*Helianthus annuus*) in malarial regions. The author's observations fully confirm the statements by Maury, Van Alstein, Martin, Valentin and A. Stüpin, according to which the beautiful plant possesses an extraordinary power of draining a malarial soil, absorbing and destroying the malarial miasms and thus preventing marsh fevers. He adduces the following facts which certainly deserve every attention of sanitarians. The Kopal district, in which he practices, belongs to typical abodes of endemic malarial fevers. In certain villages, however, inhabited by Ukraïne (South-Russian) emigrants who extensively cultivate the sunflower for industrial purposes (for obtaining the sunflower oil, which is largely used as a food article all over Russia) malaria is almost unknown—and that notwithstanding the circumstance that the said villages are situated in exceedingly low and marshy localities. Meanwhile, in all other parts of the district—including all settlements in the neighborhood, inhabited by Cossacks who do not cultivate the sunflower, but otherwise live under exactly the same conditions as the Ukraïne planters—marsh fevers of all varieties are raging to an appalling extent.

Treatment of Erysipelas.

The Lancet, January 10, 1891, says that an elaborate research, clinical and bacteriological, has recently been published by Professor Nussbaum's assistant, Dr. Julius Fessler, on the treatment of erysipelas by ichthyol, a plan which has been for some years extensively adopted in Munich. From laboratory experiments it was evident that, though ichthyol has only a slight effect in preventing the development of staphylococci, it has a very potent deterrent influence on the multiplication of streptococci; and it is well known that it is the latter kind of bacteria that are the cause of erysipelas. The method of treatment consists mainly of rubbing a strong ichthyol ointment energetically, and for ten minutes at a time, into the affected surface and in its neighborhood; ichthyol in the form of pills may also be given internally. Where there is a wound it must be very carefully disinfected, and an antiseptic dressing applied. The results of this treatment as compared with ordinary methods are embodied in several instructive tables. From these it appears that while the mean duration of the cases treated by other methods from 1880 to 1888 was about twelve days, in no single year falling below nine days, the cases treated by ichthyol from 1886 to 1888 presented a mean duration of under seven days, while in the first half of 1889 it fell to 5.6 days.

Resection of the Liver.

On December 8, Professor Iginio Tansini, of Modena, performed total extirpation of a hydatid cyst of the liver, at the same time excising a portion of that organ. There was very free hemorrhage from the large cut surface of the liver, which was controlled by catgut ligatures. The wound in the liver was closed by means of sixteen sutures, partly silk, partly catgut. The operation was followed by no rise of temperature, and the patient (a woman) was quite well in less than a fortnight.—*British Med. Journal.*

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VARICES OF THE ŒSOPHAGUS.

Vomiting of blood is a common symptom in cirrhosis of the liver. Most writers on the subject ascribe it to capillary oozing, while some, as Bartholow, have met with ulcers opening into veins near the pyloric orifice of the stomach. In a number of cases, however, no lesion has been discovered *post-mortem* to account for the hematemesis that occurred during life. It is asserted by Mr. T. Stacey Wilson and Mr. J. R. Ratcliffe, in a paper on Œsophageal Varices as a Cause of Hematemesis in Cirrhosis of the Liver, published in the *British Medical Journal*, December 27, 1890, that a varicose condition of the veins of the lower part of the œsophagus is a very common cause of hematemesis in cirrhosis of the liver. When one bears in mind that the œsophagus is not usually examined at autopsies, the fact that comparatively few cases in which this condition has been found have been reported is easily accounted for, and does not militate against the assertion referred to.

It is well understood that, as the liver shrinks through the contraction of the interstitial tissue which characterizes cirrhosis, the radicles of the portal vein become narrowed and even obliterated, the result of which is dilatation of the portal vein and its sources. Now the blood which is thus prevented from passing through the liver must seek some other channels by which to reach the vena cava and the heart—the collateral circulation becomes dilated to accommodate it. The nature of the circulation around the lower end of the œsophagus, as Mr. Wilson and Mr. Ratcliffe say, is such as to admit of an intercommunication between the blood and the portal vein, on the one hand, and that of the general systemic veins on the other. For the veins of the cardiac end of the stomach belong to the portal system, while those of the œsophagus belong to the system of the azygos and interior vena cava. Thus the capillaries in the mucous membrane at the cardiac orifice of the stomach are continuous with both systems. This can be proved by means of injections. Now the blood from the cardiac end of the stomach is normally carried to the liver by the coronary vein; but when the passage of portal blood through the liver is hindered, the blood finds an escape through the œsophageal plexus of veins formed by the coronary and the vasa brevia of the splenic vein—and there is, therefore, to a greater or less extent, a reversal of the normal flow in the veins mentioned, but mainly in the coronary vein. From the œsophageal plexus the blood finds its way to the heart through the left inferior phrenic vein, which opens into the left renal, and so it goes into the inferior cava; and through a number of small veins which run on the surface and in the substance of the diaphragm, and enter the cava as it passes through the diaphragm.

The œsophageal plexus already mentioned

is external to the muscular coat of the œsophagus, but there is another plexus beneath the mucous coat, which also becomes enormously dilated under similar conditions, and is of more clinical significance than the former. But enough has been said to show how these veins at the lower end of the œsophagus become dilated and so help to relieve the congestion of the portal system and prevent dropsy. It only remains now to mention, very briefly, that Mr. Wilson and Mr. Ratcliffe report five cases which tend to prove that hematemesis in cirrhosis is produced by ulceration of one of these varicose veins. In three of the cases in which hematemesis occurred, and in one of melæna, there were three that showed distinct ulcers into the veins before injecting, and in the fourth there was an erosion over a thrombosed vein.

In the fifth case there had been no hematemesis and no melæna, and the most careful examination failed to show any ulceration. Ascites was absent is the cases which showed the most marked varicosity.

To complete this subject, as far as it can be completed at present, we must refer to an extremely interesting and beautifully illustrated paper by Dr. Maurice Letulle, in *La Médecine Moderne*, November 20, 1890. This author maintains that cirrhosis of the liver is not the cause of varices of the œsophagus, but that this condition is secondary to the effects of alcohol on the veins which first receive it—the mesenteric and their branches. These become chronically inflamed, thrombosis occurs, and subsequent dilatation of the collateral circulation, including the œsophageal veins. A case which seems to bear out the view indicated is reported, and a very complete summary of the literature given.

Whether varices of the œsophagus are secondary to a cirrhosis of the liver or to an alcoholic phlebitis of the veins forming the portal system, probably cannot be decided now. But as there is no dispute that the hematemesis which occurs in these cases is from dilated veins, the impropriety, from a therapeutic point of view, of attempting to check the bleeding by giving ergot and other agents which constrict arterioles and thus force more blood into veins, becomes manifest. Nitrite of amyl, as suggested by Dr. Saundby, would meet the requirements much better, through its action in dilating arteries and so permitting less blood to pass into the veins. It is evident, also, that the œsophagus must be kept at complete rest, all efforts at swallowing, even of fragments of ice, being prohibited.

EXPLORATORY PUNCTURE OF THE FEMALE PELVIC ORGANS.

In years gone by, when the mortality of abdominal section as then performed was enough to appal even a stout heart, the necessity of making an absolutely exact diagnosis was far more important than it is at the present time. Then the advantages of a proposed operation had to be weighed in the balance against a prospective mortality of seventy-five, fifty, or finally twenty-five per cent. Hence it was justifiable to operate only for conditions in themselves necessarily fatal, and to select the most favorable cases. The use of the aspirator was considered to be a most desirable way of differentiating between various pelvic growths. Experience showed, however, that the information gained by the use of the aspirator was often far from satisfactory, and that even after its use a positive diagnosis was often impossible. Moreover its use was not free from danger. With the introduction of modern aseptic surgery, the danger attending simple exploratory abdominal section became so slight that surgeons have employed this method of diagnosis in obscure cases, affording as it does at the same time an opportunity to effect a cure. Exploratory puncture has fallen more and more into disrepute—being regarded as an uncertain method of diagnosis at the same time being more dangerous than exploratory abdominal section.

At a recent meeting of the New York Academy of Medicine, Dr. G. M. Edebohls read a paper in which he gives his experience with exploratory puncture of the female pelvic organs, and attempts to make the method again popular with the profession. He prescribes an elaborate technique: full antisepsis, outlining and fixing the mass to be punctured, and puncture with the aspirator syringe from the abdominal surface. Seventy cases are reported in which the method was employed without untoward results. The author advises that the method be used only by the expert, lest harm rather than good result. In the discussion, in which Coe, Dudley, Boldt, Murray, Jewett and others took part, the method met with decided opposition on the ground that it is a question whether it is right to expose a patient to the danger of puncture of the intestines, with consequent peritonitis and probably death, where it is possible to secure such good results from abdominal section if a diagnosis cannot be made without an exploratory operation of some kind. This opinion is undoubtedly in accord with the sentiment of to-day. If it be possible to so outline a mass as to be able to fix it with the examining fingers for exploratory puncture, it should be possible to form an intelligent opinion as to its nature. It is the "masses" which cannot be outlined, definitely, and which consequently are not adapted for exploratory puncture, concerning which there will be the most doubt; which doubt, in proper cases, must be cleared up by abdominal section. Finally, it is to be hoped that the method proposed by Dr. Edebohls will never become popular, as its possibilities for harm far outweigh its possibilities for good.

ATLANTA MEDICAL AND SURGICAL JOURNAL.

In its January issue the *Atlanta Medical and Surgical Journal* expresses the great pleasure with which it appears before its readers free from "inserts," or pages of advertising interspersed among its pages for scientific matter; and the REPORTER expresses also a pleasure that so admirable a contemporary has thus emancipated itself. The scientific and ethical standing of the *Atlanta Journal* is so high, and it has been such an exponent of honest medical journalism, that we congratulate it and the section of the country which it represents upon the improved appearance and more satisfactory standard to which it has advanced.

BOOK REVIEWS.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the REPORTER.]

THE PRACTICE OF MEDICINE; OR, THE SPECIFIC ART OF HEALING. By I. J. M. Goss, A. M., M. D., Professor of the Practice of Medicine in the Georgia Eclectic College of Medicine and Surgery, etc. 8vo, pp. xxix, 569. Chicago: W. T. Keener, 1888. Price, $5 00.

We find it difficult to review this book and do full justice to our readers and to Dr. Goss. The latter appears to think that remedies should be prescribed according to the pathological indications in each particular case. "The old rule of treating disease by name . . . has," he says, "proved a blighting curse to the unfortunate sick." He is also a believer in the doctrine that there is a direct or specific affinity of remedies for certain organs, tissues or parts. He seems to believe, to some extent, in Hahnemann's law of similars, but he refers to the latter's belief that dilution rendered medicines more potent as "the vague chimera of this great man."

The actual value of the book, judged by the scientific standards of the day, is not great. It is scarcely more than a compend, in which diseases are not grouped in an orderly manner, and in which undue prominence is given to mere symptoms. For example, the title of Chapter IX is "Fevers: the Exanthemata," and the first disease considered is "Malarial Hæmaturia." Whooping-cough is considered under diseases of respiratory organs, impotence under diseases of the testes, and spermatorrhœa and "onanism" (so Dr. Goss miscalls masturbation) under diseases of the prostate. The author, as was to be expected, devotes most space to treatment. The value of many of his remedies we cannot pretend to speak of, but we fear some of his statements must be accepted with caution. In speaking of the treatment of phthisis, he says that, in 1862, he gave to a patient who was bed-ridden and in the advanced stage of phthisis, "the larger portion of both lungs" "filled with tubercles," hypo-phosphites, ptelia and euonymus. The patient is said to have mended from the first week or two, finally recovered, and to be now a "*living monument*" of the efficacy of the above remedies. Dr. Goss adds that he has recently treated several cases with like success. It may be that his diagnosis was wrong, or that in the lapse of years his memory has made the gravity of the case appear greater than it really was.

The character of the book is perhaps well illustrated by the section on diabetes mellitus, which occupies

only a little less than two pages, two-thirds of which is given to treatment. The author says he cured a case of this disease by giving the patient thirty drops of fluid extract of rhus aromatica three times a day for several months. The urine of this patient yielded, upon evaporation upon a slip of glass over a lamp, "a large percentage of molasses."

The book as a whole is an odd mixture of good and bad, and it is difficult to separate one from the other. We do not think it of any value from a scientific point of view, but are willing to believe that many of the remedies it recommends, which are used almost exclusively by so-called Eclectic and Homœopathic practitioners, may be very useful.

A CLINICAL STUDY OF DISEASES OF THE KIDNEYS. By CLIFFORD MITCHELL, A. M., M. D. 8vo, pp. xii, 431. Chicago: W. T. Keener, 1890.

The author presents a large amount of useful information in this book in such a way that it is easy of appropriation by beginners. His statements regarding diagnosis and prognosis are, in the main, correct and judicious. We think, however, he is wrong in looking upon large tube casts as occurring especially in chronic nephritis; large epithelial casts are common in acute nephritis. The granular casts depicted by the author are far too black and dense; they would be taken by any one, if seen in the urine, for blood casts. The object figured on page 70 as an epithelial cast is not a cast at all; it has no body, and is merely a line of epithelial cells.

There is much of value in the parts of the book devoted to therapeutics. Standard authors on renal diseases are quoted freely, and so are Homœopathic writers. The author appears to be truly catholic in his therapeutics. This fact adds considerably to the interest of the volume. Practitioners of so-called eclectic medicine will probably find Dr. Mitchell's book very much to their taste.

TUBERCULOSIS, OR PULMONARY CONSUMPTION: ITS PROPHYLAXIS AND CURE BY SURALIMENTATION OF LIQUID FOOD. By W. H. BURT, M. D., Author of *Characteristic Materia Medica*, etc. Small 8vo, pp. 223. Chicago: W. T. Keener, 1890.

The author of this book, having noticed that it is possible to reduce the weight of a fat person by restricting his use of liquids and carbo-hydrates, was struck with the idea that abundance of water with carbo-hydrates might cure all wasting diseases, especially tuberculosis. He states in his introduction, from the results of his tests, that superabundance of liquid food, which he calls "suralimentation," when used in the first and second stages of phthisis, will enable the physician to cure more than fifty per cent. of the patients that would have to die with the best methods known to medical science up to the present date. After this astounding statement, we are surprised to find the author admit that, in the third or last stage, it will give only temporary relief. Under the etiology of tuberculosis we find the following: "To me its neural origin is as plain as any fact in pathology: its real cause being a debility pareses (*sic*), or neurasthenia of the organic nervous system." The sort of proof which appears to satisfy the author may be judged from the following statement: "The strongest argument that can be used against the bacillus theory is this: cod-liver oil has cured thousands of cases of phthisis. The attenuated homœopathic remedy has cured many thousands of cases, and the suralimentation of liquids have (has) cured many cases." As this statement stands, it would appear that the attenuated homœopathic remedy has been more efficient than either cod-liver oil or "suralimentation." Then why not use it, and why not make its virtues known, rather than those of a less-efficient remedy? But the truth is, quite apart from the truth or falsity of the bacillus theory, that no remedy at present known to science has, of itself, cured a single case of pulmonary phthisis. The most that cod-liver oil or any other food can do is to improve the condition of the patient and help him to overcome the disease.

To conclude—the book is a mixture of sense and nonsense which is not worth reading.

CORRESPONDENCE.

Double Opening into Womb.

TO THE EDITOR.

Sir: Mrs. D—— before she was married fell from overhead in a barn, landing on her feet on the barn floor. As a result she had procidentia uteri, for which she was treated by different physicians.

She wore a pessary—what kind she does not know—but so long that she says it had to be removed on account of ulceration produced.

She first consulted me when pregnant and threatened with miscarriage in 1888, and then I found on examination that she had an artificial opening into her womb at the juncture of the neck with the body posteriorly, which would admit the points of my index and middle fingers. During her miscarriage and in her confinement two weeks ago I found it no particular obstruction to labor, though it caused a good deal of anxiety.

The miscarriage and confinement cases are as follows. On December 22, 1888, I was summoned in the night by Mrs. D—— for uncommon cramps, as she called it. On questioning her, I ascertained that she was pregnant, and gone four months. On examination I found that she had all symptoms of miscarriage, and I also found that she had a second opening into her womb, from which membranes were protruding, it being dilated very much. I administered a full dose of fluid extract of ergot, and had no difficulty in delivering her of the product of conception, the placenta and the membranes. She made a speedy recovery. I suggested operation, but she would not consent.

In course of time she became pregnant a second time, and after having gone four

months she consulted me for symptoms of another miscarriage. I administered anodyne and she went to term.

On the night of December 4, 1890, I was again summoned, not for cramps but, as she then very well knew, with symptoms of labor. On examination I found the artificial os dilated as large as a silver dollar, while the natural os admitted only my index finger. In vain I tried digital dilatation.

Labor progressed, with a head presentation, but disproportion between it and the maternal parts prevented termination by natural means. I administered chloroform and applied the forceps and delivered the woman of a big boy baby through the artificial os uteri.

The mother made an uncomplicated recovery.

The womb and all maternal parts assumed their natural proportion as before delivery, no tear occurred in the neck of the womb.

This case I report to ascertain whether there are any more cases like this.

Yours truly,

A. T. Welker, M. D.

Collomsville, Pa.

Notes and Comments.

Koch's Lymph.

The *New York Med. Journal*, January 17, says: It seems that Koch was guided to his discovery by observing the action of tubercle bacilli, living or dead, on tuberculous and non-tuberculous guinea-pigs. In the healthy animal an inoculation of the pure cultivation gives rise, after a period of incubation varying from ten to fourteen days, to a hard nodule, which soon breaks down into an ulcer and persists until the animal dies. When, however, a guinea-pig already tuberculous is thus inoculated, no nodule forms, but the superficial tissue at the place of inoculation becomes necrosed and falls off. Injections of a quite dilute glycerin infusion of a pure cultivation cause the animal's condition to improve. Evidently, having got thus far in his observations, Koch was unable to overlook the obvious suggestion that even dead bacilli, or at least a solution of some of their constituents or products, contained something that might be made available as a drug and produce the same effect. It was then, therefore, a comparatively simple matter to arrive at the production of the curative liquid now in use. We see no reason why it should not now be prepared in any well-equipped bacteriological laboratory, and thus the restriction heretofore put upon its general employment be ended. In the absence of a more detailed account of its preparation than Professor Koch gives, it may, we think, be assumed that any person who would consider himself conversant enough with bacteriological methods to attempt the work of producing such a liquid would not, even without a hint as to the steps in the process necessary, have been in the least likely to produce an agent more dangerous than the Koch liquid itself. But Professor Koch feared such an occurrence when he first promulgated his method of treating tuberculosis; and his judgment was deferred to by the medical profession. He now brings up in support of his previous secrecy the argument that the less the clinicians knew about the nature of the liquid the more unbiased would they be in their observations of its action. This strikes us as odd, but there may be men so constituted. At all events, we are glad that the nature of the remedy has now been made known. The question of its curative action is still far from being settled.

[The observant reader will observe that Koch has not yet told just *how* he prepares his lymph. The whole affair is much more marked by forbearance on the part of the profession than by scientific candor on the part of Koch.—Editor of Reporter.]

Mutual Aid Association.

The recent meeting of the Philadelphia County Medical Society, at which the claims of and objects of the Mutual Aid Association were especially presented, was an occasion of unusual interest and awakened much enthusiasm. Addresses were made by Drs. Gouverneur M. Smith and Henry Tuck, of New York, the former and present incumbents of the presidential chair of the New York Society for the Relief of the Widows and Orphans of Medical Men, and by Professors Keen, Pepper, Willard and others of this city. A brief memoir of Dr. Henry H. Smith, the founder of the Association, was read by Dr. Benjamin Lee. Sixteen of those present followed the example of Professor Keen in enrolling themselves as members, or increasing the grade of their mem-

bership. The total addition to the Benevolent fund thus made will amount to about $1,300. On the adjournment of the business meeting a reception was extended to the guests from a distance, at the University Club.

The following extracts from Dr. Smith's address will convey an idea of the scope of the work of the New York Society.

"Our Society has, for a number of years, proved a blessing to its beneficiaries, and has been remarkably successful in accumulating a financial capital of $172,180.58, which insures a continuance of a laudable work in the future." After emphasizing the somewhat remarkable fact that the largest contributors to and most earnest supporters of their Society had been bachelors, and mentioning the names of the eminent physicians who in the year 1842 met to inaugurate the movement, he continued: "Do not for a moment suppose that since then it has been fostered by lesser dignitaries. Many of those who have given to it the most time and care have been men whose families would, probably, in the ordinary course of events, never derive any pecuniary benefit from it. Since 1877, the smallest number of widows aided in any one year has been ten, and the largest number fourteen; the smallest number of orphans four, and the largest number eight. During the year the Society meets once. The Board of Managers and the Standing Committee hold four stated meetings, and such special meetings as may be necessary. One matter should be especially emphasized, viz., a *charitable* element should prevail in the direction of such fraternities; while business principles should be strictly enforced in the investments of funds, a charitable disposition should be made of the revenue derived from such funds. The affluent members of the profession should deem it a duty to their holy calling to foster any such organization. It is a work in which men of all nationalities and creeds can mutually co-operate, remembering the words of the great poet:—

> 'In Faith and Hope the world will disagree,
> But all mankind's concern is Charity.'"

Testicle Therapy for Phthisis.

At the meeting of the Paris Société de Biologie, December 20, 1890, Dr Brown-Séquard declared that charlatans were selling under the names "elixir" and "tonic syrup of the nervous system," a liquid which they pretended contained the principle which he has announced as possessed of considerable dynamogenic power, and which is found in a liquid extracted from the testicles and spermatic ducts. Brown-Séquard protests against such deception of the public. The preparations to which he objects are all directed to be taken by the mouth and thus introduced into the stomach; but the gastric juice digests the fluid and destroys its dynamogenic powers, so that, even if the preparations actually contain what they profess to, they would be inert in the way they are administered. To be effective, the fluid must be injected under the skin or into the rectum.

Brown-Séquard also announced that a year or more ago several physicians had treated patients suffering with pulmonary tuberculosis with hypodermic injections of the testicular liquid, and that they had obtained very remarkable curative effects. Brown-Séquard, however, refuses to admit that phthisis can be cured with the fluid, though he does admit that, by virtue of its dynamogenic power it may produce a great increase of strength, cessation of fever and sweats, and a notable improvement in digestion and nutrition, and in the secretions. At Brown-Séquard's instance, Goizet has been experimenting since June last with the injections in phthisis. In three patients with phthisis in the second degree, the symptoms have disappeared and there has been a gain in weight and notably in strength. Dr. Uspensky has also called attention to this method of treatment. He reports that in thirty patients there has been obtained a disappearance of the symptoms of tuberculosis and a notable gain in strength and in weight. Brown-Séquard adds, that where the fluid has been filtered with care and used with proper antiseptic precautions, there is no fear of any dangerous febrile or other reaction.

Resection of Thyroid for Exophthalmic Goitre.

The *Lancet*, January 17, 1891, says that in a recent number of the *Deutsche Med. Wochenschrift*, Dr. Lencke, of Hamburg, discusses the subject of exophthalmic goitre with special reference to its treatment. He claims that as the treatment of this condition by medicine is remarkable for nothing so much as its inefficacy, if the surgeon can offer even a chance of relief his inter-

ference is justifiable, and he relates two cases in which surgical interference seems to have had the best results. The first patient was a lad of seventeen, who had the classical symptoms of the disease—rapid heart, palpitation, prominence of the eyes, and goitre. He came under treatment on account of a sudden access of the swelling, which by the pressure it exerted produced great distress, with extreme cyanosis. The heart was rapid and irregular, no rest or sleep could be obtained, and the patient was in imminent danger of asphyxia. Tracheotomy was performed, and a week later one-half of the tumor was extirpated. The operation was accompanied by much hemorrhage, which, however, stopped spontaneously, and recovery was uninterrupted. The symptoms rapidly vanished, the exophthalmos disappearing and the heart becoming quiet and regular in action. The improvement was maintained until the time at which the paper was written. Operation was undertaken in the second case, which had long been under observation, because of the good result in the first. The patient in this case was older, the symptoms were similar, and the operation was the same. The improvement was also very marked, and the patient four months ago was able to resume his occupation. It is yet too early to estimate the full value of the procedure adopted, as regards cure of the disease; but if relief can be afforded in other cases as great as was apparently obtained in those just related, a strong case will have been made out for the surgical treatment of this distressing malady.

Practiced Medicine without Registering.

In Court, at Reading, February 2, Judge Endlicht decided an interesting case. He refused a new trial to Mrs. Catharine Ebbert, of that city, charged and convicted of practicing medicine without registering, and ordered her to appear in Court for sentence. Mrs. Ebbert has since registered. She says she has been in continuous practice since 1858. In the particular case in which she was convicted, she alleged that the compensation she received was for a box of salve only, and not for medical services. Judge Endlicht says in his opinion: "Whilst it may be true that one who undertakes to cure disease by mere manipulation is not engaged in practicing either medicine or surgery, it is at least equally true that the practice of medicine includes the application of medicines for the purpose of curing, mitigating or alleviating diseases."

Sanitary Convention of Pennsylvania.

The Fifth State Sanitary Convention of Pennsylvania will be held at Altoona, Friday and Saturday, May 15 and 16, 1891, under the auspices of the State Board of Health, assisted by the Board of Health of Altoona and a committee of citizens. This is not, in any sense, a doctors' convention. All who take an intelligent interest in the promotion of sanitary reform and the protection of the public health are invited not only to be present and take part in the discussions, but to forward to the Secretary, Dr. Benj. Lee, 1532 Pine street, Philadelphia, for consideration by the Committee of the Board, not later than April 15, papers on sanitary or hygienic subjects, which they would like to present before the convention.

Habitual Abortion.

The *British Med. Journal*, Dec. 20, 1890, states that at the meeting of the Obstetrical Society of London, Dec. 3, 1890, Dr. Leith Napier read a paper on habitual abortion. Some authorities assert that "habitual" abortion is often due to indefinite sources of uterine irritation impossible to recognize. Others esteem syphilis as the most common cause of habitual abortion. Both views are disputed by Dr. Napier. Apart from disease, malformation, or physiological incompetency, there is no "habit" of aborting. The pathology of "habitual" abortion is the same as that of ordinary or single abortion. Turning to etiology, Dr. Napier showed that more than half the cases were due to uterine congestion or disease, and only 9 per cent. to syphilis. Reflex causes were discussed; at most only 7 per cent. were truly reflex. Syphilis is much more commonly the factor of premature birth than of abortion. Seventy-seven per cent. of women subject to "habitual" abortion are either nulliparous gravidæ, who begin their obstetric career by frequent abortions; or multiparous women, who often terminate fecundity by repeated abortions. Women

who habitually abort are, as a class, very fertile. "Habitual" abortion is highly amenable to treatment. Over 67 per cent. of the patients were delivered at term after cure of the cause of the "habit." Dr. Napier, in reply to a question, said he had wholly avoided treatment in his paper, but he regarded viburnum with favor. He thought congestion of the uterus more important as a factor in abortion than retroflexion. He admitted the importance of chronic cardiac disease.

Another Remedy for Perspiring Feet.

The *Medical Press*, January 21, 1891, says that Dr. Winogradoff recommends a 5 to 8 per cent. solution of chloride of zinc as an application for the prevention of undue prespiration of the feet. He begins by ordering the feet to be well washed in tepid water, and then dabs on the solution, wiping off the surplus a few minutes later. The application is best made at night, and may require to be repeated a week later. It acts as a caustic, destroying the sudoriparous glands, and should never be used except by the medical man himself.

NEWS.

—It was reported from Odessa, Feb. 2, that a hospital at Skopin has been destroyed by fire, fourteen patients perishing in the flames.

—A young Englishman named Bosanquet, was bitten by a rattlesnake, at Daytona, Florida, on February 1 and died the next day in great agony.

—On February 3, Dr. John S. Billings was chosen by the Trustees of the University of Pennsylvania Director *pro tem.* of the new Department of Hygiene, and Dr. A. C. Abbott, of Johns Hopkins University, first assistant in the department.

—Dr. C. C. Lancaster, a leading physician of Knoxville, Tennessee, died, February 3, of blood poisoning. He was inoculated with the septic matter a few days ago, while performing an operation on a body having a gangrenous wound.

—An amendment to the State Pharmaceutical law of Pennsylvania, giving graduates in pharmacy the privilege of registering without examination before a Pharmaceutical Board, was favored at a recent meeting of druggists in Philadelphia.

—A despatch from New Haven, Connecticut, Feb. 6, says that a girl about 10 years old, of Shelton, had been hiccoughing incessantly for six weeks, and nothing had afforded her any relief. She was wasted to a skeleton, and death was but a question of a very few days.

—Dr. J. D. Nicholson, resident physician of the Cooper Hospital, Camden, N. J., has resigned to accept a position in the Philadelphia Hospital. Dr. I. D. Webster, who was the junior resident physician, succeeds him, and the Board of Managers has appointed Dr. Farrar, of Virginia, to fill the vacancy.

—Clarence W. Bowen, Secretary of the Committee on the Cenntennial of Washington's Inauguration, 251 Broadway, New York, desires information regarding the portraits of Thomas Fitzsimons, Thomas Hartley and Thomas Scott, members of Congress from Pennsylvania. These portraits, for the Memorial Volume, are particularly desired, to complete the list of portraits of the Pennsylvania delegation in Congress at the time of Washington's Inauguration.

—Dr. Benjamin Lee, Secretary of the State Board of Health of Pennsylvania, has accepted the position of Secretary of the Section on State Medicine of the American Medical Association. As the meeting takes place in Washington, May 5, it is important that all papers intended for this Section should be in his hands by the fifth of April. All members of the Association desiring to be enrolled in the Section are requested to forward him their names at 1532 Pine St., Philadelphia.

OBITUARY.

TROY S. SAUNDERS, M. D.

Dr. Troy S. Saunders, who has long been a subscriber to the MEDICAL AND SURGICAL REPORTER, died Jan. 20, 1891, at Indian Springs, Ga., of acute pneumonia. He was graduated at the University of Nashville in 1867. He was unmarried, and was nearly forty-seven years old. He was a noble, good man, and sacrificed his life to the profession he loved. Many people—mostly poor ones—black and white, have been sick with the prevailing colds and coughs. He ministered to their wants, when he should have been in bed. This tribute is paid him by a life-long friend. J. V

MEDICAL AND SURGICAL REPORTER

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COMMUNICATIONS.

MEASLES, WITH NOTES OF OBSERVATIONS.

BY A. F. MYERS, M. D.,

BLOOMING GLEN, PA.

Within the past year an epidemic of measles occurred in this community, and considering the number of years since a similar epidemic took place, one will not be surprised to find a great variety of cases, old and young, and with various complications and idiosyncrasies. In February, 1890, they made their appearance in our public schools, a regular hot-bed for propagation, and consequent depopulation. In less than three weeks forty individuals were affected by this troublesome affliction, and either high or low in station, they had to succumb, unless they had paid tribute to a former epidemic.

During the prevalence of this contagious exanthem, I took note of, and either directed or prescribed for 153 consecutive cases in private practice, of either a mild or more severe nature.

Invasion.—The onset of these cases was usually slow, with catarrhal symptoms preceding the fever. The characteristic early symptoms of the disease were intense nasal, pharyngeal and laryngeal catarrh, coryza, troublesome cough, occasionally violent headache and epistaxis, muscular soreness and irregular chills. Over one-third of the patients were distressed with an insatiable thirst. Redness and irritation of the conjunctiva and lachrymation was very distinct in over half of the number for a day, and in a few for even four and five days before any other signs or elevation of temperature became manifest. Many patients had a very moderate fever; however, using the clinical thermometer with every case noted, not a single one occurred where fever was entirely absent, though it has been claimed by some observers that such cases frequently exist. The fever usually came on by the third, and in a few cases as late as the fifth day after the prodromic signs were noticed, followed by remissions, on the appearance of the eruption of a crimson color in the face and spreading over the body. The fever lasted from one to six days—with a few exceptions to the seventh and ninth, attaining its highest point in nearly every case at the fullest development of the eruption. Marked enlargement of the anterior cervical and sub-maxillary glands was noticed in twelve cases during this period.

Temperature.—The range of temperature was a matter of interest. Of the 153 cases observed, in 115 it did not rise higher than 103°; of this number only 14 did not reach 100°. Seven cases ranged at 103°, and in three families numbering 7, 6, and 8 patients respectively, together with 5 isolated cases, it extended to 104° and a fraction; and in three exceptional cases it rose to 105°, and in one to 105.5°. However alarming it seemed, all these patients who had such a high fever—and where other complications contributed largely to this dangerous rate—finally recovered.

Eruption.—In the eruption nothing unusual was noticed. However, having made this epidemic a special object of observation, I found 22 cases where I was enabled to recognize distinctly the approach of measles by a peculiar rose-colored punctation of the soft palate, the uvula, and the roof of the mouth, from eighteen to thirty hours before the rash made its appearance elsewhere.

Incubation.—The exact period of incubation I could not determine; but in 21 cases that were under personal observation three times a day, and in which I carefully noted the time from the exposure until the appearance of the eruption, it was at the thirteenth day in 17 patients. In one case it was dis-

tinctly noticed on the ninth, in two on the tenth, and one on the nineteenth day.

Sex.—The sex was noted in every case, and I found there were more females affected than males. There were 82 of the former and 71 of the latter. This proportion of the sexes is in harmony, however, with the ratio of the entire population of this community.

Age.—It will be noticed that the disease was most frequent between the ages of 6 and 10 years, higher than is generally found; but this may be accounted for by the fact that no similar epidemic had taken place for a number of years. My observations were as follows:

No cases under 7 months of age.

6	between	7	and	12	months,
19	"	1	"	3	years.
33	"	3	"	6	"
47	"	6	"	10	"
24	"	10	"	15	"
18	"	15	"	20	"
4	"	20	"	25	"
1	at	28	years.		
1	at	35	"		

Complications.—Of the complications that usually exist with or succeed this disease, the following will be briefly noted. Of the entire number, 128 were simple cases, and 27 complicated. The complications were: bronchitis, 16; convulsions—all in the early stage of disease—4; laryngitis, 3; pneumonia, 4; dysentery, 1; entero-colitis, 1; acute Bright's disease, 1; stomatitis, 2; otalgia, 1.

In this enumeration several cases are referred to twice. In no case was measles conjoined with any other eruptive disease.

Prognosis.—The prognosis was favorable in all the simple cases, every patient regaining the former excellent health. Of the 153 cases noted, only two terminated fatally. The unfavorable cases and the attending circumstances may be briefly stated.

Case 1. The first death occurred in a boy seventeen months old. The first signs of ill health were repeated convulsions for a half day. A brother having just recovered from this disease, it was surmised what was coming. I was called at this time and found the child having another spasm, continuing for over twenty minutes: the respirations were 40 to 43 per minute, the pulse-rate 135 to 140; the temperature in the axilla 105°; the child very restless; the skin hot and dry. The patient urinated frequently, but the urine was scanty. There was no appearance of an eruption. At short intervals during the intermission of the convulsions, the child would sit up and ask for water, and drink small quantities with an apparent relish. It answered questions and was evidently rational for a few minutes, when it would suddenly relapse into another fit. It continued in this manner during the following night. In the morning I found all the symptoms aggravated, continual convulsive movements, dyspnœa, 60 to 65 respirations a minute, and pulse fluctuating between 165 and 170 per minute. Bronchitis had developed during the night; and by mid-day a paroxysm of cough ended the scene. Permission for an autopsy had been refused.

Case 2. This patient was a girl eleven years old, with the eruption fully developed when I first saw her, complicated by an attack of catarrhal bronchitis. This patient had bad hygienic surroundings; the house was situated on a low, marshy bottom, with water in the cellar and the rooms very damp. As the eruption faded, catarrhal pneumonia set in, with a temperature fluctuating between 103° and 104.5°, rapid and laborious breathing, prolonged and noisy expirations, dry, painful cough, which had been loose during the bronchitis. Expectoration was now muco-purulent, the urine was scanty, and slight diarrhœa followed. In spite of all that I could do, this case proved fatal on the fifth day from the time that I first saw it.

Sequelæ.—All the patients have been under observation since their illness, and all fully recovered promptly, with the exception of the case complicated with otalgia, which became protracted, but by persistent attention for over a month, the inflammation in the middle ear disappeared, with hearing fully restored.

Treatment.—I will simply state that no routine treatment was followed, nor, in all cases, the advice usually given. I claim nothing original or novel in my procedure. The extensive administration of cold water and the various uses made of it for reducing the temperature and bringing out the eruption, is my excuse for bringing this subject to the attention of the profession.

In the management of this disease strict attention was given to the hygienic surroundings of the patient as much as the various inconveniences would permit. With a few exceptional cases this condition was very favorable. The temperature of the rooms was maintained as near as possible between 65° and 75° continually, to avoid overheat-

ing as well as chilling the body. The sick chamber was properly ventilated and shaded from bright light, to afford comfort to the eyes. Of the 122 cases having the simple form, 13 were not confined to the bed, but, being well clothed, were allowed the freedom of the room. The rest were comfortably covered in bed. Amusement was permitted in the simple cases if desired.

During the febrile period light diet was ordered, consisting of water and milk, crackers, or bread soup and tapioca. Later, as the eruption disappeared, light broths, toasts, soups and oranges were allowed. The drinks consisted of cold water, in abundance but in small quantities and frequently given. I gave cold water freely to allay the insatiable thirst; even iced water was exhibited in several cases, but in frequent small portions. Cold lemonade, orangeade and other cooling drinks were allowed *ad libitum*. To give very large draughts of cold water at once is injurious; it will frequently cause violent gastric pain and vomiting, followed by other unpleasant symptoms.

Where the temperature was very high, the skin dry and hot, and the patient often suffering from fever-pains, with a tardy appearance of the eruption, a careful sponging with cold water was very agreeable and highly beneficial, followed by a gentle rubbing with a dry towel. After it was once tried, the patients frequently solicited its repetition. In several cases where friends protested, I used only tepid water, with good results. The reduction of temperature was phenomenal in some cases. Using the thermometer, I noted four cases where it declined two degrees in one hour's time. In three cases where the eruption was tardy and there was high fever, a warm bath for about twenty minutes also accomplished our design. In no case did any unpleasant symptoms follow.

Diaphoresis, and the action of the kidneys, was carefully looked after. No patient was permitted to suffer, however, for the want of the proper medicinal treatment if indicated. No partiality was shown to any means or method.

In eighteen cases of high fever, I applied ice to the head for a few minutes at frequent intervals, by means of an ice-bag, to relieve the throbbing pains. Three cases of convulsions, in the early stage of the disease, were treated similarly together with a warm bath, until the convulsions ceased, with gratifying results.

In the fatal case of the boy cited above, much to my regret, neither of these plans was made use of.

The account of the medical treatment will be abbreviated. Of the simple form, 76 cases received no medicinal treatment except syrup mixtures of wild-cherry, scilla or ipecacuanha, for the relief of the incessant, dry, scraping cough, in such proportion as was indicated. For constipation, in the more severe cases, I prescribed an emulsion of castor oil or spiced syrup of rhubarb, according to age. As a diaphoretic, sweet spirits of nitre was used in twenty-four cases; and to control the diarrhœa, bismuth subnitrate and Dover's powder, or a few doses of camphorated tincture of opium as necessary. For six cases of high febrile reaction, citrate of potash, spirits of nitre and tincture of aconite was administered. For the conjunctival inflammation, a warm-water lotion was frequently used. The local use of vaseline afforded great relief where pruritus existed during the decline of the eruption, or where any desquamation followed.

The remarks on the treatment of the complications will be brief. Absolute rest and quiet was enforced in this class of cases as long as was deemed necessary. Bronchitis was from the onset treated with supporting measures. The diet was of the most nutritious sort; febrifuges, expectorants and external applications were used as indicated. The cases of pneumonia were treated according to the general principles given in the text-books. From the other complications, all recovered under the common treatment in vogue for such diseases. Only six patients required tonic treatment for a week, as a result of the complications.

TREATMENT OF DYSENTERY.[1]

BY D. H. BERGEY, M. D.,
NORTH WALES, PA.

During the month of July I had a number of cases which so closely resembled dysentery that, for want of a more appropriate term, I called them by that name; yet in severity, and possibly in the course of the disease, they differed somewhat from dysentery. I also experienced some difficulty in giving relief to several of these patients

[1] Read before the Montgomery County Medical Society, September 24, 1890.

by the use of the ordinary remedies. This difficulty led me to make use of a combination of agents which gave me good results, and has given equally good results in undoubted cases of dysentery since, and has led me to change my views with regard to this disease.

We are taught to regard dysentery as being primarily an acute inflammation involving the mucous membrane of the large intestine, which various authorities have attempted to trace to a bacterial origin. This theory I consider fallacious, because the micro-organisms so far found in the dejections in this disease have all been frequently found in the mouth of healthy persons where their presence was not accompanied by any pathological conditions. The bacterial origin has been exploded, unless we recognize that of Kartulis, which recently received some confirmation through Prof. Osler. Yet even these organisms, the *Amœbæ Coli*, are denied this distinction by Baumgarten.

I consider the causative element in dysentery to be an arrest of the secretion of bile, and possibly also of the pancreatic juice. I think you will grant that this theory is not unfounded, when you consider the absence of the characteristic odor and color of the dejections in dysentery. This color and odor we know to be due to the bile and to certain elements resulting from intestinal digestion.

The absence of these two characteristics in the dejections in dysentery is the most prominent diagnostic point; even more so than the presence of mucus and blood; and in the treatment of this disease the return of the natural coloration and odor of the feces, and hence the presence in them of bile constituents and the products of intestinal digestion, is the first indication that convalescence is being established.

In the cases of which I have spoken I tried ipecacuanha according to the Brazilian method of treatment, without obtaining very gratifying results. The salicylate and the subnitrate of bismuth, either alone or in combination with Dover's powder or opium, had no effect. Salines were tried in several cases without avail. Repeated doses of castor oil and laudanum gave partial relief in some of the cases where tried. Minute doses of calomel had little effect. These unsatisfactory results led me to employ an elixir, the principal agents in which were ox-gall and pancreatine. The absence of the natural coloration and odor of the feces led me to believe that the disease must have some connection with the functions of the organs furnishing these secretions; and I was led to supply their secretions artificially. The results were very gratifying. In from twelve to twenty-four hours the characteristics, which were absent heretofore, returned and the tenesmus abated, and mucus and blood were no longer present in the dejections.

I am led to believe that dysentery is due, primarily, to an arrest of the secretions of the liver and pancreas, which allows putrefactive changes to take place in the intestines, and that these putrefactive elements are the sole cause of the inflammation. The lesions, it seems to me, may be looked upon as the result of the fermentation going on, because of the absence of bile, the normal antiseptic; the lesions prolonging the disease and offering a habitat for the bacteria.

This condition, therefore, calls for antiseptic treatment, and we fortunately have, as proven by Limbourg, an efficient antiseptic in the biliary elements contained in the ox-gall, which takes the place of those secretions temporarily absent. Bile is also the best cholagogue. That it is cathartic in its action, is shown at once by the diarrhœa which accompanies excessive secretion of it, by the constipation which is ordinarily present in congestion of the liver; and by the purgative properties of ox-gall when given in sufficient doses. It seems to produce its purgative action by stimulating the secretion of the intestinal and pancreatic juices and by increasing the peristaltic action of the intestines.

In pancreatine, we have an active agent bringing about the natural decomposition of the chyme, thus rendering it rapidly assimilable; it therefore is a most important agent in the restoration of the natural functions of the liver and of the organs of assimilation, and therefore of the entire economy. The presence of fatty particles in the dejections of this disease shows the absence of the pancreatic secretion, since it is its office to emulsify fats in the presence of bile. These two agents are assuredly those whose absence allows the putrefactive changes to take place in the intestines and thereby brings about such violent attacks of inflammation of the mucous membrane of the large intestine, with its concomitant constitutional conditions—fever and prostration. It seems to me more than probable,

therefore, that the violent inflammation, at least in the simple form of this disease, is due altogether to an irritation set up by these putrefactive elements and that the disease is due primarily to an arrest of secretion in these two organs.

To further substantiate this conclusion, I may mention the fact that we have a gastro-intestinal catarrh accompanying cirrhosis of the liver, and here we have at least a partial arrest of the secretion of bile; while, when there are cysts of the pancreas, we have fatty matters in the dejections, colic-like pains, and frequently bloody stools. When, as in dysentery, the secretion of both of these organs is checked simultaneously and suddenly, as it is possible for it to be, by continued high temperature followed by cold and dampness, or by whatever cause, it is not necessary to stretch our imagination very much to picture the resulting conditions. There is really a constipation existing at the time, the dejections being composed largely of mucus and blood from the large intestine alone. The tormina and tenesmus may be looked upon as largely due to ineffectual efforts on the part of nature to unload the bowels.

We have thus far experienced considerable disappointment in the treatment of dysentery, and it seems proper to conclude that this disappointment has been due to the fact that the true causes leading to this affection have been overlooked. I believe that when we come to regard this condition in its true light we shall meet with far more gratifying results.

In the majority of cases it is preferable to preface the treatment of dysentery with a large dose of ox-gall, or other cathartic, as castor oil, to unload the bowels. When this is done, my experience leads me to predict that from twelve to twenty-four hours' treatment with ox-gall and pancreatine will suffice to re-establish the normal secretions, and to establish convalescence.

Should the tormina and tenesmus continue after the dejections assume their normal color and odor, a few injections of bichloride solution with starch-water will be followed by almost immediate relief.

This has been my experience with acute dysentery during the present season. Though it may seem fanciful to some of you, I trust you will not hesitate to try this mode of treatment in dysentery.

I have given both of these agents together in pill form and in the form of an elixir, from one-half to one grain of the ox-gall and from seven to fifteen grains of the pancreatine, every three to six hours. I have also given the ox-gall alone, in pill form and in capsules, and the pancreatine in the form of a simple elixir.

MEDICAL TREATMENT OF PERITONITIS.[1]

BY W. S. WASHINGTON, M. D.,

NEWARK, N. J.

Peritonitis was not raised to the dignity of a disease until about the beginning of the present century, and during that time its treatment has undergone many variations.

The earliest authors give copious general and local depletion, and mercurials, as the treatment. Some of them, however, used purgation, though it does not seem to have been at all popular, and we only occasionally read of it.

We find no mention of opium until about 1820. From that time till 1830, Graves and Stokes used it in large doses in perforative peritonitis, but no mention is made of its use in other forms of the disease. Sir Thomas Watson, in his classical lectures delivered in London, speaks of the profound impression made upon his mind by these reports. He himself gives rest, venesection and opium as the three main remedies to be relied on. Sir Thomas disapproved of purgatives. Dr. Alonzo Clark, about 1840, was the first to begin the systematic use of large doses of opium in all forms of peritonitis. He put his patients in a condition of semi-narcotism and kept them in that condition until the inflammation subsided. It is inconceivable, however, that the enormous amounts administered could all have been absorbed. No purgatives were allowed, and the bowels were kept confined as long as two weeks if necessary.

Dr. Austin Flint advised much the same plan of treatment, especially disapproving of purgation. Dr. George B. Wood, in the fourth edition of his work on *Medicine*, published in 1855, gives copious bleeding as the most important remedy; then came five or six grains of calomel, followed by castor oil or Epsom salts. Next in order was from fifty to one hundred and fifty American leeches, followed by opium and mercury to ptyalism.

[1] Read at the meeting of the Practitioners' Club.

While Dr. Wood deprecated anything which tended, as he thought, to produce continued friction of the inflamed serous surfaces of the intestinal convolutions, he deemed it proper to procure one or two soft evacuations daily by the use of Seidlitz powders, Epsom salts, Rochelle salts, infusion of tamarinds with cream of tartar, castor oil, or castor oil with oil of turpentine. Dr. Wood did not advise or use large doses of opium. Bauer, in Ziemssen's *Cyclopædia*, recommends ice in the outset, to withdraw heat and allay pain. He believes cold lessens the hyperemia, reduces nervous irritability and spasmodic peristaltic action. As soon as the muscular action of the intestines and blood-vessels is paralyzed by distention and pressure, the ice is exchanged for heat. The next remedy, according to him, is opium. He says the use of cathartics is completely given up. For the relief of tympanites, the rectal tube and puncture of the colon are employed, though both are admitted to be of very limited value. Wardell, in Reynold's *System of Medicine*, says our best ally is blood-letting. Then come leeches, hot fomentations and opium. Purgation means increased irritation. Dr. Henry Hartshorne, of Philadelphia, entirely agrees with Wardell. Dr. Ross, in the *Reference Hand-book of the Medical Sciences*, after speaking of local depletion, says opium is the drug most relied on, and that it should be given in full doses. The bowels should not be disturbed by cathartics or enemata until all active symptoms have subsided. Bartholow recommends leeches, the ice-bag until there is exudation, then heat, and morphia and atropia hypodermically.

Other authors have advocated similar treatment. Of course other remedial measures were used as adjuvants, but the foregoing represents the principal methods of treatment used until the last few years. I believe we are indebted to the gynecologists for a system now advocated by a large number of medical gentlemen, and known more distinctively as the purgative treatment. Under this method active purgation is employed and opium is used as little as possible or not at all. Pain and tympanites are two distressing symptoms of peritonitis. Opium will relieve pain but not tympanites. Purgatives, more especially saline purgatives, will relieve both. Epsom salts, which I prefer, does not act by increasing the peristaltic action of the intestines, but it produces a watery movement by osmosis from the blood-vessels of the peritoneum and intestines. That it does increase the amount of water in the intestinal canal has been proved by placing a solution of magnesium sulphate in a knuckle of intestine. On examination made some time afterwards an augmented quantity of fluid was found.

Among those who speak of the use of purgatives with approval is Lawson Tait, of Birmingham. He was among the first, if not actually the first, to use them, and his preference is for salines.

Dr. Nancrede, professor of surgery at Ann Arbor, Michigan, advises the use of salines in the peritonitis preceding and following appendicitis. Dr. Gordon, of Portland, Maine, in a report of a number of cases of peritonitis of various kinds in women, says: "I think the first and most important therapeutical resource is free catharsis from salines, preceded sometimes by the calomel triturates, if the stomach is irritable. If these fail to act promptly, I supplement by an enema of a concentrated solution of Epsom salts. I find the following formula effective: Magnesia sulphate, ℥ij; boiling water, f℥iij; glycerine, f℥i. It acts promptly and thoroughly, stimulating the entire intestinal canal, producing profuse watery discharges, and rapidly reducing temperature and relieving pain. Opium should be withheld unless the pain is intolerable. The enema alone often completely aborts the attack."

Dr. A. M. Jacobus, instructor in gynecology in the New York Polyclinic, says: "Peritonitis, even the so-called idiopathic form, if there be such a thing, is necessarily a serious disease; but when the patient has not only to fight it, but the non-operating opium poisoner, it means certain death in a large percentage of cases. Opium has had its day as a cure-all, and it seems now only a question of what kind of a laxative we shall use. I have seen several instances of general and pelvic peritonitis in which it appeared certain that without free catharsis the patient would have died from cardiac or respiratory paralysis, from the excessive tympanites or from septicemia in purulent cases. In several instances of obstructive peritonitis, when Seidlitz powders failed and there was excessive tympanites, an ounce of castor oil in hot milk saved the patient from certain death. We use cathartics in the inflammatory intestinal diseases of infants, and in general inflammations elsewhere as revulsives, then why not in peritonitis with effu-

sion, whether septic or not? Whether in operative cases or not opiates should be used as little as possible; but, on the other hand, saline or vegetable cathartics, followed by enemata should be used from time to time to relieve the inflammation, tympanites, pains and fever, and especially to drain the peritoneal cavity of serous or purulent effusions." Dr. W. Gill Wylie, of New York, advises and uses cathartics in peritonitis, preceding and following laparotomy for various causes. Dr. Baldy, of Philadelphia, expresses himself as follows on this subject: "The peritoneal cavity is drained of the products of inflammation; the inflamed surfaces are relieved of all engorgement by a thorough depletion of the vessels in the intestinal walls; the inflammation is most effectually stopped; the pulse and temperature almost immediately improve; and the pain is relieved as quickly as can be by the use of opium. This may seem strange, but it is a clinical fact."

Dr. John H. Musser, Assistant Professor of Clinical Medicine in the University of Pennsylvania, has reported over twenty cases of various forms of peritonitis, many of them very severe, treated after the following method. Local blood-letting, until pain is very much relieved. If in progress more than forty-eight hours, a large blister, followed by hot applications; liquid diet absolutely; stimulants to prevent collapse, to lessen its severity and to prevent tympany; sips of hot water or hot whiskey and water for vomiting; calomel in small doses hourly until the bowels are moved, and if no relief is obtained it is pushed to ptyalism. If the patient is seen early, aconite is given to children, veratrum viride to adults, until the pulse-rate is lessened. Morphia and atropia are given in small doses as infrequently as possible to control pain; twice daily often suffices. If morphia disagrees, codeia is to take its place. If the bowels are not opened in forty-eight hours, one pint of sweet oil is given by enema, followed by an enema of tepid water. Dr. Musser considers it of the utmost importance that the bowels should be opened. In threatened collapse, active stimulating medication is employed by subcutaneous injections. It will be observed that Dr. Musser employs local depletion, calomel, blisters, etc., which are not new, but at the same time it will be noted that he reduces opium to the smallest possible amount. Although in this summary of his treatment no mention is made of salines, yet in the detailed report of cases, one is recorded as having been relieved by them. The treatment of these cases by Dr. Musser was eminently successful.

Dr. Emory Lanphear, editor of the *Kansas City Medical Index*, gives his unqualified support to the saline purgative treatment, and reports a number of cases, some of which were treated by opium and others by salines. The results were startlingly in favor of the latter. Dr. Maxson, of Hartford, Kansas, Dr. Lanphear's preceptor, has treated peritonitis by salines for the past twenty years. He believes they unload the turgid blood-vessels and relieve the impeded circulation of the abdominal viscera and peritoneum; that temperature and pulse rapidly lessen in frequency; and that pain disappears almost as quickly as by the use of opium. In the second stage, he uses small doses of salines with tincture of belladonna and a limited amount of opium to relieve pain, sustain the heart and prevent shock.

In the past three years a large number of gentlemen have reported cases and testified their faith in the new method. It seems to have gained a secure footing, and it will eventually displace the old opium treatment. I entirely agree with the views of the different ones I have quoted in its favor, and can confidently recommend it to those who have not as yet had experience with it. In closing, I will report the following cases.

Case 1. One of general peritonitis. The immediate cause was sitting on cold doorsteps in front of a boarding-house late at night; the remote cause was a previous peritonitis. The patient, a woman, was of a bilious habit, and had much nausea during the whole of her sickness, which was relieved by calomel. Saline purgatives, in the form of magnesia sulphate, promptly relieved pain and tympanites, being used as often as required. Sometimes they would be given daily, at other times an enema took their place. Turpentine stupes were applied to the abdomen and liquid diet was given. One-eighth grain of morphia was administered as required; on some days none was given, on other days two or three doses would be given. The woman made a perfect recovery, and after the first three or four days was not considered dangerously sick.

Case 2. One of local peritonitis accompanying salpingitis. The patient was promptly relieved by purges of magnesia sulphate. The deodorized tincture of opium was given for pain and flannels wrung out

of hot water were applied to the abdomen. Very little opium was required or given, and recovery was satisfactory.

Case 3. One of local peritonitis following child-birth. Magnesia sulphate relieved immediately, and but one dose of one-eighth grain of morphia was needed. Although puerperal mania developed within a few days, the peritonitis disappeared without further trouble.

CYSTOMA OF JAW.

BY THOMAS H. MOORE, D. D. S., M. D.,
PHILADELPHIA

Mr. L., 46 years old, presented himself at my office, having a tumor involving the left half of the inferior maxilla. The growth, he says, began several months prior to his coming for treatment, and had attained considerable proportions. The cyst extended from the angle of the jaw almost to the median line at the symphysis. The swelling was first noticed upon the lingual portion of the jaw, opposite the second inferior molar. It gradually increased in size, and then made its appearance upon the buccal surface and extended anteriorly and posteriorly, involving nearly the whole left half of the jaw.

No reasonable doubt can be entertained but that the teeth are, in most cases, the primary cause of such mischief. But the question of the precise manner in which the morbid conditions are developed is more difficult of solution. There is no disputing the fact that foreign bodies, such as the apices of teeth, broken off during extraction, or small spiculæ of bone, attracting a serous fluid around them, finally become encapsulated or encysted and gradually extend to great proportions.

Cystic tumors of the inferior maxilla are by no means of common occurrence, and present especial features, such as slowness of growth, absence of severe pain, glandular involvement, or constitutional impairment, except such as attends any tumor interfering with mastication or deglutition. The manner of discovering their true nature is by the aid of the exploring needle. In the present case I wish to say that the patient, being possessed with a very fine set of natural teeth, none of them being devitalized, imagined they could be used for almost any purpose other than that for which they were intended. He placed a hard shellbark between the two second molars of the left side of the jaw, and cracked it. Immediately after he experienced a slight pain in the lower tooth. This was evidently the cause of the formation of the tumor. The excessive pressure upon the cancellated bone injured the endostium, producing an effusion, and that is what formed the nucleus for an extended, but slow, inflammatory action, with the consequent results

Obviously, there is but one sort of treatment for these tumors, and that is surgical. When they have not extended or reached to such proportions as to completely destroy the contour of the bone, I make a free incision, to evacuate the contents. In the case being described this consisted of a dirty, bran-like substance, mingled with a glairy, blood-stained fluid. I made a further examination with the exploring needle, and discovered another but smaller cyst posterior to the one just opened, and having its connection by a small sinus opening into the first one. I evacuated its contents also, and proceeded to wash out the cysts with tepid water. I then injected a stimulating solution of dilute tincture of iodine, and packed the cavity with gauze, which I renewed, repeating the injection of dilute iodine for a few days, until complete closure was accomplished. No internal medication was required in this case.

REPORTS OF CLINICS.

BUFFALO GENERAL HOSPITAL.

SURGICAL CLINIC—PROF. ROSWELL PARK.

Tubercular Gumma, breaking down into Cold Abscess.

Dr. Park said the patient, a young compositor, asserted that two years ago a swelling had occurred on his wrist without much pain or redness of the skin. After applications of iodine, vigorous handling, etc., it enlarged. A year ago he noticed a thickening and softening of the palm of the hand with a peculiar sensation. When he pressed in the middle of the hand there was a bulging of the tumor above the wrist. This phenomenon persisted about six months. The swelling of the wrist is about 2½ inches in diameter, considerably elevated, with a red-

dened surface, and looking very much as if there was an acute abscess, but without heat and with no particular pain; so that the idea of acute abscess can be dismissed. The boy is more or less emaciated and, in time past, he has been worse than at present. He has a cough and looks phthisical. He is not a type of the scrofulous diathesis, and probably is not phthisical at present; though he is on the point of becoming so. The trouble about the wrist may be cold abscess, that is, tubercular abscess, or a tuberculous or syphilitic gumma—new formations of the type of infectious granuloma—or a cystic or solid tumor. Leprosy need not be considered in this part of the country. There is no history of syphilis. It cannot be a malignant tumor; for if it were it would have spread more in the last two years, and it would have become firmly seated and immovable, through the contraction of adhesions to surrounding parts. The patient can move his fingers freely.

A cyst or lipoma would fluctuate as this swelling does, but the skin over them would not be red. A fibroma would be firm and hard, and it, too, would not be covered by a reddened skin, unless it were on the point of ulcerating. The diagnosis is narrowed down to tubercular trouble—either a gumma or a gumma broken down into a cold abscess. It probably began in the cellular tissue between the skin and the deeper parts, and it has probably formed adhesions to the sheathes of the flexor tendons. The exposure of the tendons is a serious thing because the new formed cicatricial tissue will lash the tendons down.

A synovial sheath filled with fluid is called a hygroma, and this is the condition in the palm. Sometimes a hygroma contains not only fluid but little solid masses apparently due to precipitation from the fluid. A hygroma may be considered a special form of "cysts by distention of previously existing cavities." The solid bodies may be of the size of millet seeds or even as large as beans. The average size is about that of a grain of rice, and they are often called rice-grain bodies. Very little is certainly known of them. They consist almost entirely of fibrin and are probably formed by the rolling into masses of fibrinous matter in the hygroma. This condition is probably quite independent of the tubercular gumma of the wrist.

Dr. Park then laid open the tumor on the wrist and considerable fluid and puruloid matter and masses of coagulated lymph were evacuated. The pyogenic—or, as Dr. Park prefers to call it, the *pyophylactic*—membrane was peeled off, preserving its sacculated appearance. The curette was then used. Both during the operation and during the dressing, rigid antisepsis was carried out. Sometime before the operation the wrist was shaved and scrubbed and enveloped in an antiseptic bandage.

New York Correspondence.

MEETING OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

President's Opening Address: Medical Examiners.—Cystoscopy.—Holt's Divulsor.—Sarcoma in Brain.—Discussion on Refraction.—Appendicitis.—President's Annual Address: Education of Girls.—Experiments with Koch's Lymph.—Gynecology.—Electrical Treatment.—Election of a President.

The eighty-fifth annual meeting was held in Albany, February 3, 4 and 5, 1891, with Dr. W. W. Potter, of Buffalo, as President. This meeting was, as usual, well attended by delegates from all parts of the State and by invited guests.

The President, in the course of his opening address, congratulated the Society that the State was now near the realization of its long-desired deliverance from the thraldom of a system which had, more than all other causes, retarded the progress of medicine. A State medical examining Board would come into power this year. The right to grant medical diplomas was now divorced from that of the license to practice. The medical colleges were all bound by the provisions of the new law to give three full courses of medical instruction in different years before granting diplomas, since candidates would not be admitted to the examination for license with less preparation. It was more than possible that the effort would be made to weaken the law by amendment, or to have it repealed. He urged that the law as it now stood should be accepted loyally. If, on due trial, it should be found to contain defects they could be remedied as experience showed their existence.

Dr. Willy Meyer, of New York, in a

paper on the progress of cystoscopy in the last three years, gave the histories of some very interesting examples of the great advantages which had been derived from the use of this instrument in determining many points, by actual observation, of the processes going on within the bladder which proved of signal service in the indication for treatment. The author had demonstrated to his own satisfaction that cystoscopy was an easy and harmless examination, but that its successful employment required experience. In all kidney or bladder disease it might be practiced repeatedly if necessary, before operative interference for diagnostic purposes was undertaken. It should be performed as a *dernier ressort* after all other known means for making a diagnosis had been exhausted. If properly applied cystoscopy would clear up uncertainty in an obscure disease of the bladder. In most cases we could determine with the help of electric illumination of the bladder whether we had to deal with disease of the bladder or of one of the kidneys. We should soon be able with the instruments now in process of perfection to catheterize the ureters and gather the urine from each kidney separately. These facts would tend to make superfluous a preliminary section or a perineal invasion for diagnostic purposes.

Dr. F. R. Sturgis, of New York, made a plea for the advantages which he contended the Holt's operation by divulsion of the urethral strictures possessed over internal urethrotomy. It was well known that even fatal hemorrhages occurred as a sequel to the latter method. Since adopting rapid dilatation he had never had an instance of hemorrhage uncontrollable by cold or septic injections. By Holt's method the occurrence of severe chills was avoided, in fact he now deemed it unnecessary to take precautions against this accident. Septic complications he had never known as the direct result of rapid divulsion.

Dr. D. Lewis said he had got quite accustomed to patients coming to him from the urethral operator with their boots full of blood, and then it took as long to get them into shape as it would have done to cure the stricture by gradual dilatation.

Dr. L. C. Gray narrated an interesting case of paralysis of the motor and muscular senses involving the upper and lower extremity of one side, in which the symptoms had been rapidly developed and in which a diagnosis had been made of tumor of the centrum ovale. At the autopsy a round-cell sarcoma about the size of a hickory nut was found about one-fourth of an inch beneath the cortex at the junction of the leg and arm centre of the posterior central convolution. Dr. Gray considered this case unique in view of the rapid growth of the lesion, as indicating the exact localization of the muscular sense.

Dr. St. John Roosa, in a paper on the causes of asthenopia, denied the existence of a perfectly normal refraction. The emmetropic eye was not known in the human race, unless as a rarity. It was absurd to attempt the cure of asthenopia by tenotomies upon the ocular muscles. All the causes of this condition, excepting in those cases which were congenital and resulted from irregularities in the development of various diameters of the eyeball, were to be looked for in abnormal states of the nervous system.

Dr. Noyes emphatically opposed this view and believed that muscular insufficiencies might often be found and treated by prisms or operation and the existing asthenopia thereby benefited or cured.

An entire session was devoted to the subject of appendicitis. Dr. C. McBurney said that clearly-defined rules as to when a case of appendicitis might be left to medical treatment alone could not be laid down. It might be laid down as a rule with but few exceptions that the indications for advancing disease could be clearly made out by the end of thirty-six hours, if an early diagnosis had been made and this had been followed up by subsequent careful examinations. Significant symptoms at this period offered the necessary indications for operation.

Dr. Robert F. Weir said he had been obliged to modify his opinion of a year ago. He now believed that intermediate laparotomy or operation in the quiescent stage in recurrent cases might be done where the patients were debarred from the enjoyment of life or the ability to earn a living.

Dr. A. Vanderveer, of Albany, considered that the care of cases of appendicitis, so far as the physician was concerned, consisted in an early diagnosis, and that then it became his duty promptly to share the responsibilities of the case with the operating surgeon until surgical interference had been decided upon or negatived.

The President, in his annual address, discussed the problem of the education of girls. In the course of his remarks he said that the sexual system was the pivotal part of wo-

man's organism, and when disordered or diseased the pernicious effects of such derangements pervaded her whole being. The reproductive organs were in ultimate relation with all the other organs, through the ganglionic system and with the brain through the cerebro-spinal system. At puberty and sometimes before, as well as after, the nervous element was dominant in the female economy, and these two systems, the sexual and nervous, acted and reacted upon each other with a complexity difficult to comprehend. Now if the nervous supply to the sexual system was received from an overtaxed and badly-nourished brain, it was but reasonable to anticipate disturbance of the functions of the latter. The essence of many of the diseases which afflicted young women lay, not in the reproductive organs in the beginning, but in faults incident to imperfect hygienic surroundings, faulty alimentation, overwork in study, and a variety of causes which operated banefully at a time when, by the predomination of the sexual sphere, the local expression of the fault was referred to the sexual system. He would have young girls taught the importance of eating good, plain, nutritious food, and above all, the necessity of eating a hearty breakfast. Too many young women had grown up to regard it as vulgar to indulge the appetite at the morning meal, and had been allowed to cultivate the habit of mincing and sipping at a few dainty dishes or had been permitted to go without breakfast altogether. It had been said that a woman's physical beauty was in direct proportion to the amount of beefsteak and mutton chops she could consume at this meal.

Elaborate reports were made in a series of carefully-prepared papers by a number of physicians, upon whom have devolved the initial experiments with Koch's lymph in New York and elsewhere.

It would be superfluous to go over the ground of evidence and information, the details of which are already graven upon the mind of every inquiring physician in the land. Expressed as a simple equation, it would appear that with the exception of lupus, and some cases of laryngeal tuberculosis, which are so far reported cured or greatly benefited, the lymph has failed as yet to realize the overwrought expectations which characterized its reception as a specific therapeutic agent. It was, however, calmly stated that the time had not come when a final opinion could be demanded, and that to the best of the belief of the various experimenters, the agent would yet prove as powerful, from a remedial point of view, as it was now shown to be in determining the existence of tuberculous tissue within the human organism. It was also conceded that to Koch would belong the honor of ushering before the medical profession a therapeutic principle pregnant with possibilities, the importance of which was beyond prophecy.

In the course of a long session devoted to the subject of gynecology Dr. McMurtry, of Louisville, stated that when a patient presented the history of recurrent attacks of pelvic inflammations it was at once indicative of leaky tubes. In such event the only treatment was by abdominal section. It was amazing to see with what reluctance the medical profession had come to accept this great advance in pelvic surgery. Even now, when masses of suppurating tubes and ovaries were dug out of the pelvis in the midst of virulent peritonitis, and the patients were saved from an hitherto fatal condition, many eminent members of the profession stigmatized the procedure as the castration of women. So far as he was aware surgeons operated upon the female pelvis for local disease only and never with the idea of affecting a cure of reflex disturbances and obscure symptoms.

In a discussion as to the value of electricity as a remedial agent in the treatment of uterine tumors Dr. Ross, of Toronto, expressed the opinion that electricity was fast losing its fashionable favor and that the battery was walking in the footsteps of the spray; still it might remain of use to the profession in a variety of ways. Dr. Gill Wylie thought that electricity as a destructive agent to the tissues of the tumors was practically of no influence. If used to stop hemorrhage it must be employed in such strength as to act as a cautery. It was important to avoid any form of treatment which would leave a scar in the uterine tissues, which would be liable to close up the glands and follicles, thus interfering with normal secretion and setting up a train of reflex symptoms. He considered the use of electricity as dangerous as that of operative procedures.

Dr. A. W. Suiter, of Herkimer, was elected President for the ensuing year.

—Picrotoxine, the active principle of cocculus indicus, is considered by Bokai as the best physiological antidote for morphine.

PERISCOPE.

The Koch Treatment in Vienna.

The correspondent of *The Lancet*, January 31, 1891, says: Koch's second publication has caused considerable surprise in medical circles, and especially the first passages of his paper in which all the publications made by clinical observers on the action of the remedy were ignored. Recollecting the statement of Minister von Gossler, that the preparation of the remedy could not be described (a unique statement in view of the great advancement of natural science), the physicians were somewhat astonished by the simplicity of the preparation of Koch's liquid, the more so as Koch was found to be following the directions initiated by Pasteur's school, and by the works of the late Dr. Wooldridge, Hankin and others, without mentioning even the names of his scientific predecessors. It must be assumed that Koch's second publication has not been less premature than his first one, and that it has been provoked by Virchow's reports. The effect of suggestion on the subjective symptoms in patients could not be better illustrated than in the recent era of Koch's treatment. At first it was rare to find a patient subjected to the cure who did not feel better at least in some way after the injections; but after Virchow's publication, which has been widely circulated by the lay press, the majority of patients in the General Hospital commenced to complain of different new subjective troubles which were ascribed by them to the action of the liquid, and there were frequently cases where the patients, formerly highly enthusiastic, declined to be treated further by Koch's method. Certainly the General Hospital, with its constant pressure of space, has not been a suitable place for such an extensive trial as has been made here at the clinics, where about 30 per cent. of the beds were alloted to tuberculosis and lupus cases—that is, to cases which would not have applied for admission to hospital wards under ordinary circumstances.

It cannot be said that any case has been cured by the treatment, but it must be stated that improvement has taken place in some of the cases of surgical tuberculosis. New eruptions of lupus nodules have made their appearance in Professor Kaposi's improved cases. There is also a difficulty in the improved cases as very large doses (5 centigrams and more) do not produce any reaction, and one does not know how far the dose of the injection can be raised. It is extremely difficult to say anything about the pulmonary cases. It seems that there are two different types. In one of them the temperature curve rises after every injection corresponding to the reaction, but returns to the previous level; while in the other the temperature curve does not return to its former level, and the patients remain feverish after the reaction has passed. The latter type is the less favorable for the treatment, and to it belong most of the fatal cases.

Not less difficult is the explanation of the anatomical facts, as the pathological changes occurring in the course of tuberculous disease have not been fully recognized till now. and there is no other disease which has been more neglected by pathologists on the Continent on account of its frequency. But in slight cases of laryngeal tuberculosis, where the changes could be observed clinically by the laryngoscope day by day, it could be stated that the injections of "Kochin" caused the rapid and extensive appearance of new ulcerations, sometimes of highly destructive tendency, and at the last meeting of the Medicinisches Doctorencollegium a case was shown where the ulcerative process occurring after the injections was an extensive one, which has never been observed by any of the Viennese professors. These observations seem to corroborate Virchow's statement that a dissemination of the tuberculous virus takes place in the body due to the injection. Referring to the diagnostic value of the fluid, it has been reported already to *The Lancet* that it produced local and general reaction in cases of leprosy, actinomycosis and fever (with small doses, one to two milligrams) in apparently healthy persons. The explanation of the action of his liquid given by Koch in his recent publication was also not believed to be satisfactory in medical circles here. It seems to me that the specific action of the liquid must correspond to a specific chemical substance contained in the mesoblastic tissues under certain pathological conditions—*e. g.*, tuberculosis, lupus, lepra, actinomycosis—and Koch's discovery will certainly stimulate the hitherto neglected study of pathological chemistry. At present we know only a single chemical substance peculiar to tuberculosis—viz., cellulose, or at least a substance exhibiting all the

reactions peculiar to cellulose, which was discovered some years ago in the blood and in the tissues of tuberculous cases by Dr. Freund, of Vienna. This discovery, reported in *The Lancet* of 1887, confirmed later by Dr. Kabrhel, of Prague, and which is also highly interesting from the naturalist's standpoint, did not receive much attention.

Treatment of Painful Menstruation.

Dr. E. H. Champneys, at the conclusion of several lectures on painful menstruation, writes as follows of the treatment of this condition in the *Lancet*, Dec. 27, 1890: It will be impossible to do more than indicate principles of treatment. These comprise treatment between and during the periods. In the first place comes the question of general mode of life. Generally speaking, this should not be too sedentary. Plenty of healthy exercise, and especially riding, will promote the circulation through the pelvis, and give the generative organs a better chance of developing. In the same connection must be mentioned the maintenance of the regular action of the bowels by laxatives, and particularly salines. This has the same purpose: to avoid stagnation of blood in the pelvis. It is probable that of all drugs in the treatment of chronic pelvic disorders, Epsom salts are the most valuable. Indeed, with constipation, none of this class improve, even if treated by the newest alkaloids. The diet should be simple and wholesome; in fact the patient should go into a sort of gentle training. During the pain most patients are better at rest, or even in bed; but some find their pain relieved by exercise, even unusually active. Pessaries (except the Hodge's pessary in a few cases of descent with retroflection, and except the stem pessaries) he believes to be absolutely useless. The stem pessaries are not always useless, but are dangerous, and should not be used. Incision of the os externum is useless; incision of the os internum is not always useless, but is highly dangerous. Among drugs, guaiacum, with or without sulphur, is sometimes useful, taken regularly in milk as a powder, or as a confection. Castoreum sometimes abolishes the spasm completely.

Dr. Champneys has known cases treated by nearly, if not quite, all the usual drugs unsuccessfully, get well suddenly as soon as castoreum was given. It is best given in the form of tincture, from twenty to thirty drops three or four times daily during the pain, with or without a few drops of tincture of nux vomica. A hot foot bath, and a good glass of hot gin-and-water at bedtime, at the beginning of the pain, is an old and valuable remedy. It probably acts by relaxing the vaso-motor and muscular spasm. The gin should be given once a month only. Ergot is sometimes useful by causing tonic contraction, and stopping what Reil would call the irregular, fibrillar, streaky, non-peristalic uterine contractions. Dilatation is the last resort. It is generally contra-indicated in the presence of inflammatory signs in the pelvis, even if old. It must be carried out with all antiseptic precautions, and is not, in his opinion, so trivial a proceeding as to be safely done in the consulting-room. The pain also is often agonizing, and is far greater than that caused by some operations for which anæsthetics are habitually given. For these reasons he prefers to perform dilatation at one sitting under anæsthesia, and with full antiseptic precautions, after ascertaining that the genuine dysmenorrhœal pain is evoked by dilatations of the os internum, a point which greatly improves the prognosis. Nothing can be promised, for dilatation may give temporary relief, permanent relief, or no relief at all. Still, considering the slight risk, he uses it rather freely, for there are cases which seem most unpromising, and yet are cured by it. He speaks of one such case; "a patient who had suffered for years, had had many treatments, including division of the cervix, which was followed by perimetritis, completely matting the posterior part of the pelvis. The pain was not only menstrual, but almost continuous. Her medical man in the west of England sent her to me to see what I could do for her. In spite of the very unfavorable conditions I dilated her cervix, and she lost from that time both menstrual and inter-menstrual pain. Her medical man wrote to me some time later to suggest that as she was so much better he might dilate the cervix again. I advised him to let well alone, and he took my advice."

The best time to dilate the cervix is about midway between the periods. Hegar's dilators do very well, or we can use the metallic bougies. The dilatation should not be pressed when great resistance is felt, or the cervix may be lacerated, even with fatal result. The object is not to enlarge, but to stretch the canal. But this stretching is gen-

erally not satisfactory unless the largest bogie varies from the size of a cedar pencil to that of the tip of the little finger. Two or three-bladed dilators are bad instruments; they stretch the canal unequally, and are liable to tear it. They are out of fashion in England, though not apparently in America and on the Continent.

Mammary Abscess in the Virgin.

Dr. Jule E. Marcus, of Cincinnati, gives in the *Cincinnati Lancet-Clinic*, January 17, 1891, an interesting account of a case of abscess of the breast in a young girl.

Cases of mastitis in the young, he says, are not altogether uncommon, as histories of cases are related, though in limited numbers, by various English, German and French authorities, in connection with the general subject of breast diseases of an inflammatory character. It is, however, a rare event for the mamma during the period of its development to go on to suppuration, though frequently subject to temporary sensations of pain, irritability and tenderness from various causes. Dr. Marcus has had, in a fairly extended practice, but this one case. The patient was seventeen years of age, a well matured, hearty appearing girl, who prided herself on never being sick. Her menstrual period arrived with her fourteenth year, and was always correct as to time and quantity. Her only illness previous to this abscess was an œdema of the left knee, in connection with fleeting pains in the ankle and shoulder of the same side, occurring during the last spring. She was placed on the usual anti-rheumatic remedies, with the result that in ten days she was quite well, and able to take her place at her desk as stenographer.

In June she had a painful condition of the chest on the left side, locating the trouble over the sternum, and beneath the breast and under the arm. It had only been within the past two or three weeks that she has become fully conscious to the fact that there was an irregular painful condition, constantly becoming more persistent, and claiming her attention.

The only symptom was pain of lancinating character, shooting from behind the breast, back to the muscles of the shoulder-blade, and extending downward in the side. There was no fever, no malaise; the girl had no cough, nor difficulty of breathing, and Dr. Marcus presumed there was another exhibition of her rheumatic trouble, and prescribed accordingly. She took salicylate of soda, hydriodic acid, etc., etc., but no marked improvement followed. Dr. Marcus examined the breast carefully, with no suspicion, however, of an inflammatory trouble being present, but could find nothing to explain the persistent pain, that was not varying in character, and was her only complaint. The girl began losing rest at night, but had no acute or excessive attacks of pain; never complained of throbbing or beating that would have led him to think an abscess was forming. Dr. Marcus again made a careful examination, but found no local visible signs, certainly no lymphatic enlargement in the region, and was therefore surprised when in the space of twenty-four hours a rapidly developed inflammatory action set in. Diffused redness, swelling, tenderness over the entire breast and neighboring muscles were present.

Dr. Marcus anticipated deep-seated trouble, and aspirated, drawing some matter and settling the diagnosis of a deep-seated, intra-glandular abscess of the mamma, chronic in character, and of long, slow development. On opening the lobes with a curved bistoury, cutting from the areola downward, with a deep, free incision, two teacupfuls of pus escaped. At the end of two weeks there remained a fistulous track.

Some weeks following, the breast again swelled, became tense and red, and intensely painful. In consultation with Dr. Ransohoff, the patient was anæsthetized, and the breast well opened. All the lower lobes were honeycombed with abscesses, with deep sacs over the pectoralis-major muscle. The gland was thoroughly scraped, and the abscesses broken up, drainage-tubes inserted, and iodoform gauze dressing applied, and the case did nicely, with such local and constitutional attention as is usually given to surgical cases.

Nothing remained at the end of the third week but some disfigurement of the gland.

Chronic abscess of the breast of the young is probably more influenced by catemenial disturbance than any other source. The gland at the period of puberty is in sympathy with the menses in a greater state of functional activity than at any time excepting the early period of lactation. Any unusual interference with the structural changes of the breast at this period would be apt to produce inflammatory action—not

frequently going on to suppuration, however. At the period of full development of the breast after the menstruation has been fully established, these gland inflammations are said to be of most common occurrence, and the slow developing chronic abscesses of more frequent occurrence than the acute. Cases of abscesses in both mammæ in a virgin are cited, establishing a pathological cause; where a traumatic origin would most likely suggest itself if only the one breast were involved.

In a brief review of the literature on the subject, Dr. Marcus found reference made by various authorities to cases of mastitis occurring in young subjects of both sexes. Velpeau relates histories of three cases not especially interesting. Bressler ralates a most interesting case of pyemia and death from breast abscess in a young female child. Following the abscesses in both glands, others developed in different parts of the body, and the child died of pyemic poisoning. Thomas Bryant relates histories of three cases of mastitis in virgins; all interesting, and in two cases recurrent abscesses developed after the lapse of considerable interval of time. In none of the recorded cases coming under my notice was a traumatic origin assigned, excepting Bressler's. In that case, squeezing the breast to produce a flow of milk was the accepted cause for the original inflammatory action in the breast; and he makes a point of calling attention to the fact that such a practice of working the breasts in young infants is common in the lying-in room, and may at any time be productive of harmful effects in the infant. Such a practice can only be deplored, and quite forcibly shows how necessarily attentive must be the practitioner to even the smallest details regarding the welfare of his patient in the sick-room.

Billroth says, in his treatise on the *Diseases of the Female Breasts*: "Inflammation, with formation of abscess after puberty, and unconnected with pregnancy, are very rare. The course is more tedious than in puerperal mastitis. Of the seven cases that have come under my notice, five suppurated, and two underwent resolution."

Artesian Wells in Iowa.

The *Engineering Record*, January 31, says that the director of the Iowa Crop and Weather Service, seems, from a recent article in the Iowa *State Register*, to have undertaken quite an important work in the direction of developing the subterranean water supplies of the State. It is probable that water can be obtained from artesian wells in nearly all parts of the State. But, as sinking such wells is an expensive operation, and, if done hap-hazard, may be barren of results, it is proposed to have made, with the assistance of a geologist, Prof. R. Ellsworth Call, a systematic geological examination of the whole State, so as to determine the localities in which desirable water-bearing strata would be found at moderate depths, making wells sunk therein reasonably sure of being successful. Director Sage hopes, in time, to be able to map in this way all such areas of artesian probability, for the benefit of farmers and others interested in obtaining water supplies.

To assist in this work circulars have also been sent out for the purpose of obtaining existing information relative to artesian wells already sunk, such as character of strata penetrated and especially of that in which the water was found, dip of strata, temperature and quality of water, amount of flow, etc., and also a record of unsuccessful wells.

This project, if pursued intelligently and thoroughly, must give results of great value to the citizens of the State.

Cancer of Bartholinian Gland.

At a recent meeting of the St. Petersburg Obstetrical and Gynecological Society, Dr. I. A. Woff has related an exceedingly rare instance of a solid new growth developing in a Bartholinian gland. A married woman, aged 42, who had been regularly menstruating since her fifteenth year, and had a labor at full term and two abortions, received a contusion of her left labium majus. Shortly afterwards she noticed at the spot a lump of the size of a pea, which began to gradually increase. On admission to Prof. K. F. Slavïansky's clinic, the patient had a tumor of the size of a goose's egg, involving the posterior part of the labium majus and an adjacent portion of the labium minus. On the inner surface of the former there was present an orifice, from which a dirty-looking fluid was oozing out. The new growth was excised together with portions of the labia. A microscopical examination revealed that the tumor was an adenoid cancer (*adeno-carcinoma*) of the Bartholinian gland.

During a discussion following Dr. Woff's

communication, Dr. Voskresensky said that he had also seen a case of a solid new growth of the gland. In 1887 a woman of 62 years had consulted him on account of indolent movable dense tumor. The latter had been excised fairly easily and proved to be of a fibroid structure. Two years later the patient returned with another tumor, which had developed in the same situation, but this time appeared to be of a malignant nature. On this occasion the excision was very difficult, being accompanied with an "enormous hemorrhage." Prof. A. I. Krassowski, the illustrious obstetrician and gynecologist, emphasized that solid new growth of the Bartholinian glands were extremely rare, while cysts and abscesses were fairly common. Personally, he had not come across a single case of the former kind. The speaker added that in his hands excision of Bartholinian cysts was invariably accompanied by a severe hemorrhage.—*Vratch*, No. 49, 1890, p. 1127.

Treatment of Paroxysmal Nerve Disorders.

In the *Practitioner*, January, 1891, Dr. Frederick Pearse has a short article on the treatment of paroxysmal nerve disorders, including in this class asthma, migraine and epilepsy. Dr. Pearse has great confidence in the efficacy of belladonna juice and chloral. In asthma he gives fifteen to twenty minims of the juice, with ten grains of chloral, every four hours, during an attack. To break up the habit, he gives the chloral and belladonna night and morning, or every night. He seeks to prevent attacks of migraine in much the same way, sometimes giving the chloral and belladonna every night for a few days before an expected paroxysm. Antipyrin, in large doses, he says is the most serviceable for the paroxysms of pain in migraine. Most persons, however, find small doses effective.

In the treatment of epilepsy, he has found chloral and belladonna useful to assist the bromides, and he mentions borax in thirty-grain doses with apparent approval.

Case of Ancephalia.

Dr. O. V. Lëonova, a medical woman of Moscow, communicates a remarkable case of an ancephalous monster, which was born alive (at full term) and survived for about *seventeen hours* (so that the parents had had enough time to baptize it). On the *post-mortem* examination (under Prof. D. N. Zernoff's guidance), the brain proved to be entirely absent, while the spinal cord terminated in the shape of a knot, which was adherent to a layer of cicatricial tissue, stretched horizontally across the base of the skull and representing the cranial vault. The said knot was found to constitute a rudimentary lower end of the medulla oblongata, consisting almost totally of white matter. The bulbar gray substance was represented by a single nucleus—namely, by that of the *nervus hypo-glossus*. In other words, the infant had been able to live for nearly a score of hours in spite of a complete absence of the respiratory centre.—*Transactions of the Moscow University Physico-Medical Society*, Nos. 3 and 4, 1890, p. 89.

Poison Glands of Toads and Salamanders.

Science, January 23, 1891, says that a microscopical study by Herr Schultz, of the skin of toads and salamanders, has yielded some interesting results. As stated in *Nature*, there are two kinds of glands,—mucous and poison glands. The former are numerous over the whole body: while the latter are on the back of body and limbs, and there are groups in the ear-region behind the eye, and in the salamander at the angle of the jaw. The mucous glands are spherical, have a clear, glassy appearance, and contain mucous cells and mucus: the poison glands, which are in regular strips on the salamander, are oval, much larger, and have a dark, granular look, from strongly refractive drops of poison, a good re-agent for which is copper-hematoxylin. The poisonous elements are from epithelial cells lining the glands. The mucous glands are for moistening the skin; and the liquid has no special smell, nor a bitter or acid taste. The poison glands are, of course, protective; and the corrosive juice is discharged differently in toads and salamanders, on stimulating electrically. In the latter it is spirted out in a fine jet, sometimes more than a foot in length; whereas in the toad, after longer action of the current, it exudes sparingly in drops. The physiological action of the poison has lately been studied by some Frenchmen. There is no reason, according to Herr Schultz, for supposing that the mucous glands sometimes become poisonous.

THE

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CHARLES W. DULLES, M. D.,
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The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

NEUROSES OF THE GENITO-URINARY APPARATUS.

At a recent meeting of the Chicago Academy of Medicine, Dr. G. Frank Lydston made an address in regard to genito-urinary neuroses, in which he very properly limited the term to cases of purely functional derangement of the genito-urinary organs dependent upon pathological conditions of neighboring organs and conditions—probably of a spasmodic character—immediately dependent upon organic lesions of some portion of the genito-urinary tract itself. There are few morbid conditions of a functional character, which are so trying to the patient or so embarrassing to the surgeon, and in the experience of physicians it is found that they are apt to be more often consulted regarding these functional nervous derangements than for the actual diseases upon which they depend. In view of the vast amount of labor and talent that has been devoted to the study of the reflex neuroses of women incidental to pathological conditions of the uterus and its adnexa, it is, as Dr. Lydston said, surprising that more attention has not been given to analogous conditions in the male, due to disturbances of the generative organs, and especially of the urethra.

Taking as the point of departure the prostate, there will be found a close similarity between some of the morbid states affecting it and certain pathological conditions of the uterus. Anatomically and physiologically the prostate strongly resembles the uterus. The tendency of its muscular tissue to undergo degeneration, and to form fibro-myomatous growths is strikingly like that observed in the case of the uterus. It will be found that certain remedies which have a marked action upon the unstriated muscular fiber of the uterus have a somewhat similar action upon the prostate, this being especially true of the ergots of rye and corn and hamamelis. Certain sedative remedies have a special controlling effect upon irritative affections of the uterus, ovaries and prostate alike. Carrying the argument a little further, it will be found that certain irritations of the prostate produce effects very like that induced by utero-ovarian irritation in women. False spermatorrhœa — spermatophobia — pseudo-impotency, involving disgust for the sexual act, melancholia, hypochondria, neuralgias whether of contiguous or remote nervous filaments and nervous inhibition, amounting almost to complete paralysis, are all possible results of urethral or prostatic irritation, and these conditions are all represented by very similar disturbances, such as hysteria and its congeners in the female, due to morbid conditions of the generative organs.

One of the interesting features of stricture of the urethra is the ensemble of symptoms of a nervous character that is so often seen, these neuroses being often entirely disproportionate to the degree of organic trouble

present. Cephalagia, neuralgia in various localities, particularly sciatica, lumbar and intercostal neuralgia, are quite common, but are probably regarded by both physician and patient as coincidences rather than as bearing any consequential relation to the stricture. Associated with these symptoms are others, quite as prominent in some cases, of a purely mental character, such as melancholia, disturbed sleep, hypochondria, incapacity for intellectual effort and deterioration of business capacity, perhaps associated with great irritability of temper. Disturbed digestion and general impairment of nutrition are quite constant. That these various abnormal conditions depend upon the stricture, Dr. Lydston said, is never appreciated fully until that organic disease is cured, when the complete restoration to health demonstrates their true relation to the primary source of irritation. Some cases of gleet are associated with considerable mental depression, which is commonly ascribed to the moral effect and the supposed drain upon the system. This lack of mental equilibrium may arise from reflex irritation through the sympathetic system, which is so closely allied with the functions and nutrition of the sexual organs. Morbid conditions of the urethra not only cause reflex neuroses in other portions of the body, but they are frequently the reflex result of disease of contiguous strictures. Thus Dr. Lydston has noted cases of spasmodic stricture depend upon hernia and varicocele, and Dr. Otis has described some very interesting cases of chronic spasmodic stricture of reflex origin. Operations about the anus are frequently followed by spasmodic stricture and consequent urinary retention and morbid conditions of the interior portion of the urethra often cause reflex disturbances of the deeper portion of the canal or indeed of the bladder. This is very familiar in connection with the results of contraction of the meatus.

These remarks of Dr. Lydston, who has made a special study of the subject of which he speaks, may well attract attention. In one sense it can hardly be said that the remote effects of disturbances of the genito-urinary apparatus have been neglected, for many quacks have dwelt upon them too much to their own advantage. But it is true that the nervous derangements due to disturbances or disease of the genito-urinary apparatus of men have not been studied as thoroughly and as systematically as their congeners in women have been, and it may be well to have this point impressed upon physicians, so that some of the zeal now perhaps needlessly spent upon the genitalia of women may be directed to recognizing and curing the ailments of the sterner sex.

TRANSPERITONEAL HYSTERORRHAPHY.

From time to time the various methods for permanently anteverting the retro-displaced uterus have been commented upon in the Reporter. Dr. Florian Krug, of New York, has proposed a new method of ventro-fixation of the uterus without opening the peritoneal cavity. His method is applicable only to cases of obstinate, movable, backward displacements of the uterus, which have not proven amenable to other treatment. The technique is as follows: The patient is put in Trendelenburg's position, the usual preparations for an abdominal section having been made. An assistant now seizes the anterior lip of the cervix with a tenaculum, and inserts a sound into the uterus, and a catheter into the bladder; and brings the uterus forward, by gentle efforts, against the abdominal wall. A small incision is now made through the linea alba down to the peritoneum, at the point which is selected for the attachment of the uterus. The finger inserted into the wound can locate the fundus, and also the bladder, when the sound and the catheter are alternately pushed upon. A special needle is now passed through the abdominal wall into the peritoneal cavity, and is made to de-

nude about one square inch on the anterior surface of the uterus, the needle then being passed through the body of the uterus and made to emerge at a place opposite to the point of entrance. It is now threaded with silkworm gut and withdrawn. The suture is now tied, and usually suffices to close the wound. From five to eight minutes are required for the operation. Dr. Krug has operated upon six patients with good results.

The test of the value of any operative procedure is the results to be obtained by its use. At the same time, the writer does not believe that the procedure proposed by Dr. Krug has a wide field of usefulness. Many retro-displacements of the uterus, in which the uterus is freely movable, give rise to no symptoms, and require no treatment. Most cases which cause suffering are curable by the proper use of tampons and a pessary, and it is only the small remainder for which the operation is recommended. In these cases the operation comes in competition with Alexander's operation, with hysterorrhaphy done without incising the abdominal wall (Kelly), and with hysterorrhaphy preceded by abdominal section (Olshausen, Kelly). It is difficult to see how that this method gives a better fixation than is obtained by ventro-fixation without incision of the abdominal wall, and the writer is aware of no case in which permanent fixation has been secured by this method. The subsequent behavior of these six cases will be awaited with interest, for if the fixation prove permanent, Dr. Krug will prove a benefactor, as providing an easy method of curing certain obstinate, backward displacements of the uterus.

NASHVILLE JOURNAL OF MEDICINE.

The *Nashville Journal of Medicine and Surgery* opens the new year with a new and very much improved form, and we hope will enter a new era of success.

BOOK REVIEWS.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the REPORTER.]

ESSENTIALS OF PRACTICE OF MEDICINE. Arranged in the form of questions and answers. Prepared especially for students of medicine. By HENRY MORRIS, M. D., Late Demonstrator, Jefferson Medical College, etc. With a very complete Appendix on the Examination of Urine. By LAWRENCE WOLFF, M. D., Demonstrator of Chemistry, Jefferson Medical College. Small 8vo, pp. xv, 426. Philadelphia: W. B. Saunders, 1890. Price, $1.00.

This volume includes *The Essentials of Practice*, by Dr. Morris, and *The Essentials of the Examination of Urine*, by Dr. Wolff, which have heretofore appeared as separate parts, forming Nos. 8 and 9 of Saunders' series of compends. The plan of these books is too well known to warrant discussion, and the necessarily brief manner in which diseases are handled almost disarms criticism. In looking over the book, however, several improvements have been suggested. For example, in speaking of ordinary facial erysipelas, Dr. Morris would have done well to make it clear that sore throat and swelling of the cervical and sub-maxillary glands generally precede an attack, and that a relapse is liable to occur as long as the throat and nasal passages remain in an unhealthy condition. Under typhlitis and peri-typhlitis, also, the author should have stated that these affections are really, in the great majority of cases at least, attacks of appendicitis. Again, he is in error when he says that the urine of *chronic* parenchymatous nephritis is "scanty, high-colored and of high specific gravity." It may be diminished in quantity, but it is not scanty or high-colored, and the specific gravity is lower, instead of higher, than normal. The author makes substantially the same statement regarding the urine of *acute* parenchymatous nephritis, of which disease, of course, it is true.

Dr. Wolff's portion of the book has been reviewed recently in the REPORTER, so that no special mention need be made of it now.

In spite of the defects which we have noted, the book is a good one, and it will prove very helpful to students preparing for examination.

A TEXT-BOOK OF MATERIA MEDICA, PHARMACOLOGY AND SPECIAL THERAPEUTICS, with many new remedies of late introduction. By I. J. M. GOSS, A. M., M. D., Professor of the Practice of Medicine in the College of Eclectic Medicine and Surgery, Atlanta, Ga., etc. Second edition. Revised by the author. 8vo, pp. xlviii, 586. Chicago: W. T. Keener, 1889. Price, $5.00.

This is a book on materia medica and therapeutics written by an eclectic for eclectics, as its rather long title indicates. Theoretically, electicism, that is to say, the method of one who picks and chooses what he believes to be best, without following any leader or theory, is the method adopted by every intelligent practitioner of medicine; practically, however, those who adopt the title eclectic have a theory as to the action of medicines, and, as might be expected, it is as false as that which forms the basis of homœopathy or allopathy. The theory of eclecticism, as stated by Dr. Goss, is: "That when medicines are introduced into the system they are digested, and being absorbed and circulated through the system, they have, *per se*, an affinity for certain parts of the organization (*sic*) upon which they have a specific action, and are then elim-

inated." It would appear from this definition that the real eclectic is the remedy, which selects the part upon which to act, and not the prescriber, who chooses the remedy.

The usual assertions are made about medical science advancing fast, and that "ere long '*pathys*' and '*isms*' will no longer clog the wheels of advancement." We could wish that knowledge had traveled so far that even Dr. Goss would know that no intelligent man believes in the theory which the term "allopathy" expresses, and that no school teaches it.

As to the arrangement of the book, nothing need be said, except that it is unscientific. It is, nevertheless, of considerable value as a work on therapeutics, for most, if not all, of the standard remedies are considered fairly, with many new ones. Of the value of the latter one cannot judge from Dr. Goss's statements alone, because he is too prone to speak dogmatically. They may, however, be very valuable, and Dr. Goss has done a real service in calling attention to them. The chief fault of the book is the fact that the impression left upon the reader is that diseases are groups of symptoms instead of processes, having definite causes, courses and results. One who followed Dr. Goss's teachings might become an excellent dispenser of drugs, and might give great relief to his patients; but he never could become a physician. One cannot help suspecting, also, that Dr. Goss praises many of his remedies unduly, and that the effects which are asserted to follow their use will by no means surely follow when the remedies are used by others. Of this charge, however, Ringer and others who ought to know better are equally guilty.

CORRESPONDENCE.

Antipyrin in Puerperal Fever.

To the Editor.

Sir: I was somewhat surprised to read in the Reporter for June 31, the following, in an article quoted from the *Lancet*. "Dr. McBeath has never noticed in any publication that antipyrine has been used with success in puerperal fever." Not to go any further, I may say that as long ago as 1887, I used antipyrin in a bad case of "puerperal fever" in twenty-grain doses—smaller quantities having proved ineffectual—with benefit, so far as reducing a high temperature (105°+,) and quieting delirium and restlessness were concerned. That case and others were reported in the Reporter during that year, I think. I have learned to esteem antipyrin highly in all diseases characterized by restlessness, delirium and high temperature, and have not observed any bad effects, perhaps for the reason that I invariably accompany or follow it with either an alcoholic or aromatic spirits of ammonia. Nevertheless, I do not believe it exerts any specific action in puerperal fever. From what I have seen of this disease, I believe that the treatment having most to commend it is that based on what is assumed when it is spoken of as puerperal septicemia, and that the good effects obtained by antipyrin may likewise be obtained by phenacetin or antifebrin.

Yours truly,
Stanley M. Ward, M. D.
Scranton, Pa.

Medical Examiners' Bill in Pennsylvania.

To the Editor.

Sir: Canada and eighteen of own States have passed laws establishing "examining boards" as proposed by the "Riter" bill, now before the Legislature of Pennsylvania, and in consequence the States not so protected are receiving more than their quota of piebald doctors.

The public in this State are protected by Inspectors of Weights and Measures from dishonest tradesmen, and druggists are compelled to qualify before a State Board of Examiners, and why should they not be protected from incompetent physicians? As the law now stands, no evidence of medical knowledge is required before engaging in the practice of medicine. The most ignorant has only to make an affidavit that he has been in practice for ten years to become a registered physician, even though he has to make his mark, because he cannot write his name.

The medical college with hospital attachment has become, of late, one of the money-making industries of the country, with unlimited capacity, free raw material, and the motive power supplied and the running expenses shared by the public by means of the "*charity act*," by appeals for aid for the hospital.

By the terms of the "Riter" bill, all desiring to practice medicine must pass a satisfactory examination before duly-appointed medical examiners for the State, irrespective of schools or systems. The eclectic is left free to make his own selections; the electropath can still perform miracles with a fifteen-dollar battery; the hydropath can drown every known disease in water; the faith curer and magnetic healer can pray and magnetize to his heart's content; the homœopath can still administer his preparations of the matter from small-pox sores, or the itch pustules of the negro, his solutions or powders of bed-bugs or cock-roaches, of

the acarus found under the wing of the Philadelphia house-fly, of tarantulas, snakes, red ants, spiders, potato-bugs, plant-lice, snails, wood-lice, skunks, wasps, lizards, toads, vipers, or guano, or of the excreta of the whale, etc.—all of which will be found in the list of materia medica contained in the *American Homœopathic Pharmacopœia*, Boericke & Tafel, 1883.

All former legislation on this subject has been effectually frustrated by the above schools, especially the homœopaths, who have been most bitter against any law which would compel them to undergo an open and public examination of their fitness to practice medicine. Yet, notwithstanding the above fact, by posing as martyrs they succeeded in obtaining State aid to the amount of fifty thousand dollars last year, and are aiming to get at double the amount this year.

Many cases might be cited to demonstrate the necessity for the passage of the proposed bill, but the following will suffice:

An innocent, hard-working German, suffering from stone in the bladder, applied for treatment to a member of the Philadelphia County Medical Society. He had been under treatment for over a year, of a woman who sold bread from her shop in the morning and practiced medicine when not otherwise engaged. According to his statement, she gave him "yarb" teas to drink, pulled and manipulated his testicles, causing him intense pain; instructed him to urinate in pigs' bladders and to suspend them on a tree, and as these bladders rotted he would be relieved of his trouble, but should he ever again look at that tree his trouble would return. This not being successful, she instructed him to urinate on a broom, which would generate a current of electricity which would pass from the broom, through the stream, to his bladder, and thereby effect a cure. This woman was prosecuted by the Philadelphia County Medical Society, with a number of others, for practicing without being registered. She pleaded guilty in order to suppress the foregoing facts, which would have appeared at the trial, paid the fine imposed by the Court, then registered under the ten years' clause of the Registry Act, and, if still living, is one of Philadelphia's registered practicing physicians, with all the privileges of the most learned and skilful practitioners of the day.

If the homœopaths want the community to have such persons practicing, let them continue to oppose the Medical Examiners' Bill—if they do not, let them support it, as the only measure proposed which would give the community a satisfactory method of compelling all who assume such responsibilities to attain a definite standard of education, and the only one which could not be evaded by medical colleges.

Yours truly,

J. H. Lopez, M. D

Philadelphia.

Notes and Comments.

Information about the Army Medical Department.

The Medical Department of the Army consists of one Surgeon-General with the rank of Brigadier-General; one Assistant Surgeon-General, one Chief Medical Purveyor and four Surgeons with the rank of Colonel; two Assistant Medical Purveyors and eight Surgeons with the rank of Lieutenant-Colonel; fifty Surgeons with the rank of Major; and one hundred and twenty-five Assistant Surgeons with the rank of First Lieutenant of Cavalry for the first five years of service, and of Captain of Cavalry subsequently until their promotion by seniority to a majority.

With the rank stated in each case the pay and emoluments of the rank are associated. The salary of each grade is a fixed annual sum, payable monthly; but at the end of each period of five years of service the annual sum representing the pay of the grade is increased by ten per cent. until forty per cent. is added. After twenty years of service the forty per cent. additional continues to be drawn, but the further increase of the pay by ten per cent. additions ceases, *i. e.*, an officer, although he may have served twenty-five or thirty or more years can, under existing laws, have no more than forty per cent. added to his pay proper by way of increase for length of service. The pay of a first lieutenant of cavalry, or of a medical officer during the first five years of his service is $1,600 per year, or $133.33 per month. At the expiration of his five years of service he becomes, by virtue of that fact, a captain, and his pay is that of a captain of cavalry, $2.000 per year, increased by ten per cent. for his years of service, viz., $2,200 annually, or $183.33 monthly. At the end of his tenth year of service this rate of pay is increased by the service-addition to

$2,400 annually, or $200 per month, and after five years more the service-addition makes his pay $2,600 annually, or $216.67 per month. If he continue in the rank of captain, at the end of twenty years of service his monthly pay becomes $233.33; but about this time promotion to a majority is usually obtained, and a major's annual pay of $2,500 with forty per cent. added, makes the monthly pay of the major and surgeon $291.67. Subsequent promotion, investing the individual with the rank of lieutenant-colonel, colonel and brigadier-general, augments the monthly pay respectively to $333.33, $375.00 and $458.33. Compulsory retirement at the age of sixty-four years increases the rapidity of promotion to the younger men; and when retirement is effected either by age, or by the accidents of service prior to reaching the retiring age, the rate of pay subsequently drawn is seventy-five per cent. of the total salary and increases of the rank held by the individual at the time of his retirement. Thus, a major retired for broken health after twenty years' service draws seventy-five per cent. of $291.67 per month; a colonel retired for age, seventy-five per cent. of $375.00. The medical officer has the right of selecting quarters in accordance with his rank, and when stationed in a city where there are no Government quarters, commutation money, intended to cover the expense of house rent, is paid to him. The Government provides forage and stable room for the horses of the medical officer, and when traveling under orders the expenses of transportation are paid by the Quartermaster's Department.

Among the privileges granted to medical, as to other officers of the Army, is that of leave of absence on full pay. The authorized leave amounts to thirty days annually. This leave is not forfeited if not taken during the year, but is credited to the officer, who may thus accumulate a continuous leave of four months on full pay. If he desires to be absent for a longer period than four months, and the permission is accorded him, he is reduced to half-pay for all time in excess of the four months or maximum of cumulated leaves of absence. Absence from duty on account of sickness does not affect the relations of the officer with the paymaster; he continues to draw full pay.

A commission in the Medical Department of the Army is an instrument which is good for life, premising conduct consistent with its retention on the part of its possessor; but it involves no contract which binds the individual to service for any given number of years. On the contrary, should the medical officer find on experience that civil life has greater attractions for him than that of the Army, there is nothing to prevent him from at any time tendering the resignation of his commission.

A young medical officer on appointment is usually assigned to duty for a few months at some large post where there are other officers of his department, to afford him opportunity of becoming acquainted with the requirements of the Army Regulations and the routine duties of military life. After this he goes to some post west of the Mississippi river, where he serves a tour of duty of four years. An assignment in the east follows the leave of absence which is usually taken at this time; and in after years his stations are selected so as to give him a fair share of service at what may be called desirable posts as an offset to the time spent at less desirable stations.

Candidates for appointment to the Medical Corps should apply to the Secretary of War for an invitation to appear before the Army Medical Board of Examiners. The application should be in the handwriting of the applicant, should give the date and place of his birth and the place and State of which he is a permanent resident; it should be accompanied by certificates based on personal acquaintance from at least two persons of repute as to citizenship, character and moral habits. Candidates must be between twenty-one and twenty-eight years of age (without any exceptions), and graduates of a regular medical college, evidence of which, the diploma, must be submitted to the Board. The morals, habits, physical and mental qualifications and general aptitude for the service of each candidate will be subjects for careful investigation by the Board, and a favorable report will not be made in any case in which there is a reasonable doubt.

The following is the general plan of the examination:

I. The physical examination will be rigid; and each candidate will, in addition, be required to certify "that he labors under no mental or physical infirmity, nor disability of any kind, which can in any way interfere with the most efficient discharge of any duty which may be required."

II. Oral and written examinations on subjects of preliminary education, general liter-

ature, and general science. The Board will satisfy itself by examination that each candidate possesses a thorough knowledge of the branches taught in the common schools, especially of English grammar, arithmetic and the history and geography of the United States. Any candidate found deficient in these branches will not be examined further. The examination on general science will include chemistry and natural philosophy, and that on literature will embrace English literature, Latin, and history, ancient and modern. Candidates claiming proficiency in other branches of knowledge, such the higher mathematics, ancient and modern languages, etc., will be examined therein, and receive due credit for their special qualifications.

III. Oral and written examination on anatomy, physiology, surgery, practice of medicine, general pathology, obstetrics and diseases of women and children, medical jurisprudence and toxicology, materia medica, therapeutics, pharmacy and practical sanitation.

IV. Clinical examinations, medical and surgical, at a hospital, and the performance of surgical operations on the cadaver.

Due credit will be given for hospital training, and practical experience in surgery, practice of medicine and obstetrics.

The Board is authorized to deviate from this general plan whenever necessary, in such manner as it may deem best to secure the interests of the service.

The Board reports the merits of the candidates in the several branches of the examination, and their relative merit in the whole, according to which the approved candidates receive appointments to existing vacancies, or to vacancies which may occur within two years thereafter. *At the present time there are five vacancies to be filled.*

An applicant failing in one examination may be allowed a second after one year, but not a third.

No allowance is made for the expenses of persons undergoing examination, but those who are approved and receive appointments are entitled to transportation in obeying their first order assigning them to duty.

Politics and Pension Examiners.

In an editorial, the *Indiana Medical Journal*, February, 1891, speaks as follows in regard to a recent appointment by the President.

The *Journal* is not a partisan paper, but occasionally politics trends so closely upon the interests of the profession and the welfare of the sick, that our readers will excuse us for entering a solemn and vigorous protest against the appointment by President Harrison of an incompetent negro, S. A. Elbert, said to be a physician, upon the Examining Board for Pensions in this city, displacing Dr. R. F. Stone, the ablest physician on the Board and a veteran Union soldier. This appointment is, to say the least, an outrage upon common decency, and an insult to every soldier residing in Indiana and every reputable physician of Marion county and the State.

If Elbert were a physician of eminence or marked ability in any department of medicine, there might be some word said, by the administration, in extenuation of the act reflecting upon the ability of no less than five ex-Union soldiers, now reputable physicians, who were applicants for position upon the Board at the beginning of this administration. But such is not the case. This negro does not approach mediocrity in medical attainments, and it is doubtful if he could give the origin and insertion of one muscle in the human body.

The appointment is an inexcusable, indefensible and disgraceful blunder. From among two hundred physicians of this city and county, many of whom are men of marked ability in the profession, the little General is unable to select one who can do honor to the place, himself, the appointing power, and the G. A. R., so he is constrained to select one of the two sable followers of Æsculapius. The purpose of the appointment is apparent to the most obtuse; yet it remains to be seen whether this appointee can wield a political influence which will overbalance that of the two hundred physicians of Indianapolis, the five thousand physicians of Indiana, and the thousands of veteran soldiers who are held in contempt by this administration, and compelled to submit their claims for pensions to the judgment of an incompetent negro doctor.

The various Boards of Examiners for Pensions were created by the government for the purpose of fairly adjusting the claims of wounded and diseased soldiers, and it was intended that they should be composed of the very best medical talent available, in order that justice might be done to both soldiers and the government. But it has remained for Benj. Harrison to not only vio-

late his pledge made to the soldiers, during and after the campaign of 1888, viz., that that section of the revised statutes making it obligatory—other things being equal—to appoint soldiers to places of remuneration under the government in preference to civilians, should be enforced, but he has deliberately, with this promise still fresh upon his lips, prostituted the office of Pension Examiner to the basest political purposes, unmindful of his sacred obligations to the Union veterans and their interests, the claims of comradeship, and the sanctity of his oath of office.

We do not believe there lives a soldier in Indiana who is so lost to self-respect as to present himself before the Indianapolis Board, as now constituted, for examination; nor can the other members of the Board preserve their dignity, self-respect, and the respect of the profession in any other way than by resigning.

At the stated meeting of the Marion County Medical Society, January 20, there being forty members present, the following resolutions, presented by Dr. Frank Ferguson, were unanimously adopted:

Resolved, That the recent action of the President of the United States, in removing from the Board of Pension Examiners of Indianapolis an honored member of this Society and a veteran Union soldier, in order to give place to one who is not, and who never has affiliated with the profession, and who does not possess the necessary qualifications for the important trust thus committed to his hands, is a base and inexcusable prostitution of the office of Pension Examiner to partisan purposes and an insult to every reputable physician in this city and State.

Resolved, That the Secretary is instructed to forward a copy of these resolutions to the President of the United States and to the daily papers of this city.

[It would be pleasant to know that there was some better reason for the President's action in this matter than that which our contemporary's remarks indicate—or that the President had corrected his error.]

Statement by Tait Corrected.

Sir Spencer Wells writes to the *Lancet*, January 31, to correct an assertion made by Mr. Lawson Tait, and seems to do so pretty effectually. He says that at the meeting of the British Gynecological Society, December 12, 1888, Mr. Lawson Tait said "he had a specimen to show which bore very much upon what had just been said; he showed the appendages from a lady, thirty-nine years of age, with a very remarkable history. She had been married at the age of seventeen or eighteen, and had two children within twenty months of her marriage. Soon after her second confinement she contracted gonorrhœa from her husband, and she had never known what it was to be well since. She had led a life of single misery for several years. Then she married again, but her health did not improve, and she never became pregnant by her second husband, so that ever since nineteen or twenty she had been absolutely sterile. During the last seven years she had been the patient of a distinguished gynecological baronet, who had, however, failed to relieve her. Ultimately she had been referred to him and he had operated. She had double pyo-salpinx of old standing, and it was very difficult to say which was tube and which was ovary. There were abscesses in both ovaries, and if he had attempted to tap them from the vagina, he would have been obliged to tap several cavities. Instead of doing anything of the kind, he opened the abdomen a month since, and the patient was now practically cured. A case like that was worth a dozen hypothetical imaginations. There was a woman who had been an invalid for years, who could have been relieved at any time, who had been under the care of all the well-known specialists of London, many of whom had declared that there was nothing the matter."

In the letter published in the *Lancet*, January 24, Tait adds that if anybody is answerable for this failure "it is Sir Spencer Wells, who, during seven long years, treated this poor woman uselessly by pessaries, etc." And he adds that the case is "not a failure," . . . the patient is "absolutely cured, for I have the diseased parts in a bottle."

Sir Spencer Wells says: "This lady is now in London. I have submitted the following questions to her, and I add her replies:

"1. During the seven years 1881–88 were you under my care, and did I fail to relieve you? *Reply:* I consulted you in 1879, after Dr. Palfrey had failed to do me any good. You operated on me in the summer of 1879; I was in good health after that until you again operated on me in 1880.

After that I enjoyed good health until 1887.

"2. Had you, before 1888, been 'an invalid for years,' or 'led a life of single misery for several years?' *Reply:* Except between my second confinement and 1879, I had been in good health.

"3. After your second confinement had you 'been absolutely sterile?' *Reply:* I had two children after my second confinement—one born dead, one lived two weeks and I had one miscarriage at three months.

"4. Have you been 'under the care of all the well-known specialists in London, many of whom declared that there was nothing the matter?' *Reply:* You are the only medical man I consulted in London between 1879 and 1888, and no one ever told me that there was nothing the matter.

"5. Did I treat you 'for seven long years by pessaries, etc.?' *Reply:* No, you never used a pessary; nor, after your second operation in 1880, treated me except for slight ailments, and that seldom. In 1887, while you were abroad, I was treated by Mr. Smith, of Brighton, after a carriage accident and was recovering when you returned.

"6. Remembering your state before and after the operation performed at Birmingham in November, 1888, has that operation proved to be, in your opinion, a 'practical cure' or a 'deplorable and disastrous failure?' *Reply:* A decided failure.

"I need only add to this the fact that the operation I performed in 1879, assisted by Mr. Thornton, was amputation of part of the elongated cervix uteri. Dr. Palfrey had repeatedly injected solution of perchloride of mercury into the substance of the cervix, and it was feared that the disease was papilloma or epithelioma. Examination proved that it was simple hypertrophy of the utricular glands, or adenoma. About a year after this amputation, the remains of the cervix showed some tendency to enlarge and proliferate, and I destroyed the left side by the actual cautery. For two or three days after this there was a good deal of pain and some fever, but they soon subsided, and until 1887—about seven years—the patient was as well as most people, and for several months after her second marriage, in February, 1888, remained in good health, riding, rowing and walking four or five miles without fatigue. Since the operation in November, 1888, she has been a confirmed invalid. The failure to the husband has been 'disastrous' in expenditure; to two devoted daughters in health and anxiety from continuous nursing; to the patient 'deplorable' in more than two years' almost continuous suffering and shattered health. It is a very poor consolation to her to be assured that she is 'absolutely cured' because her 'diseased parts are in a bottle.'"

Medical Examiner's Bill in Pennsylvania.

Under the head of Correspondence, the *New York Medical Times*, February, 1891, publishes the following, which is especially interesting as appearing in a journal long sailing under the homœopathic flag.

Medical legislation in Pennsylvania is in an unsettled condition. At the last meeting of the Legislature the Medical Examiners' bill was defeated through the active efforts of the New School. In anticipation of renewed efforts for its passage this year, the New School will offer a substitution measure entitled "An act to establish a State Board of Medical Education." This board is to consist of nine members to be selected equally from three lists of ten names submitted by the State medical societies "to the intent that the three systems of medicine, homœopathic, allopathic and eclectic, be equally represented thereon."

The duty of the board is to regulate the extent and character of the preliminary education to be required of all medical students; to fix the minimum curriculum of studies in medical colleges, provided that the course shall be not less than four years, which shall include three years of lectures. Each graduate of colleges as upon evidence of the dean, has conformed to the requirements of the board, shall receive a certificate entitling him to register in any county of the State.

Graduates of other colleges whose standing is approved by the board receive a similar certificate allowing them to practice, but if from colleges of a lower standing they must first pass an examination which shall apply to their preliminary education as well as medical knowledge.

Should the board discover after the passage of the act, that any medical college has granted the degree to any one deficient either in preliminary or final examination it shall proceed against such college for infringement of the law. The penalty for the first offense is a fine, and for a second offense a fine and the certificate withheld from future graduates except upon examination before the board. In conviction for a

third offense the charter of said college shall be annulled.

It is difficult to see what advantage this bill has over a fair Medical Examiners' bill. Both admit the principle of outside interference with the right of college faculties to decide who shall enter upon the practice of medicine. The Medical Education bill does this by prescribing the curriculum and then approving the work of colleges living up to it. The Medical Examiners' bill does it by requiring a final examination of all graduates before they shall be allowed to practice in the State. The latter method is the simpler one, and makes no discrimination in favor of medical colleges located in the State, and is similar to the methods adopted by the profession in other States.

It would be difficult for the Board of Medical Education to decide that other medical colleges in the United States were living up to its standards, because even in Pennsylvania, to make sure of this fact, part of section 6 provides that "the board shall delegate one or more of their number, who from time to time shall make an inspection of the methods of instruction employed and the facilities for teaching, in each such medical college and annually report the same to the board."

The New School bill, by removing the fear of another examination from all who graduate at colleges in the State, legislates for the colleges rather than for the profession at large, because they would attract more students by holding out as an inducement the freedom of practice in Pennsylvania to all their graduates, and it is very probable that a large number of the latter would enter the already overcrowded ranks of the profession in that State.

Let Pennsylvania pass a Medical Examiners' bill that is fair to the whole profession of that State, and when the remaining States have done likewise, then let us have a National Board which shall prescribe a uniform examination for all graduates in medicine (this was first suggested by Prof. Osler of Johns Hopkins), so that having passed the examination in Pennsylvania, the certificate of that examining board shall be accepted by every other State as granting the right to practice medicine.

State Board of Health.

At the quarterly meeting of the State Board of Health of Tennessee, January 6, 1891, the Secretary, Dr. J. Berrien Lindsley, read a report, in which he said that of the forty-four States forming the American union, thirty-four have created Boards of Health. These differ widely in their powers and functions and also in the means at their disposal for efficient work. Some are merely advisory bodies. Others have great executive power. Some are so niggardly endowed as to have only a nominal existence. Others are so munificently supported as to be seen and felt through beneficent work in every section of their field.

The older States of the Northeast first recognized the value of such agencies for promoting the public welfare. Among these Massachusetts and New Jersey are prominent, appropriating thousands annually for their support, and in addition printing for distribution among the people large editions of reports and circulars.

In no part of America have the objects of such Boards met with so great favor as in the new, wide-awake and rapidly advancing States of the Northwest. The great farming States, especially Michigan, Illinois and Minnesota, may be mentioned as illustrations. The volumes issued by the State Boards of Michigan and Illinois have given those States a national—even more, a European reputation. Michigan and Minnesota are also distinguished for the wonderful cooperation received from local Boards, which in each State number fifteen hundred or more.

In every instance where a State Board has been furnished with liberal means it has found favor with the people and has become a permanent and valued portion of the State machinery, second alone to its kindred branch of Public Education.

Tennessee has a Board of Health rather peculiar in its structure, capable of furnishing to the State great results at a minimum of cost, as has been tested more than once in its brief history.

It is in fact a collegiate body, composed of five medical experts, each proficient in his own department, and of two men eminent in railroad and mercantile circles. Each of these members is at the beck and call of the State whenever his services are needed, and at very moderate cost. In addition, the Secretary, who is not a member of the Board, is always ready on a moment's notice to visit any locality upon its order.

The ordinary work of the Board and the readiness for extraordinary occasions is

greatly facilitated by the publication of a monthly bulletin [from which the REPORTER makes this abstract] which is systematically circulated throughout the State, and likewise sent to public libraries, boards of health, and similar institutions in all the States as well as to a very large list of exchanges. The bound volumes take the place of annual reports, for which there has been no statistical material. This *Bulletin* is also the journal of the State Weather Service, an indispensable agency of all live States, which was about to perish five years ago, when this Board, recognizing the intimate connection of climatology with the work, saved its life.

Five and a half years' experience fully demonstrates the wisdom of this action. Practically, it has been copied by what is virtually the National Bureau of Health at Washington.

A prominent feature in the *Bulletin* is the publication of truthful vital statistics, without favor or partiality. Of course, with the incomplete and perhaps exaggerated returns from 1885 to 1890, errors were unavoidable. All statisticians understand this. From now on these statistics should be accurate and reliable. One marked result of the steady circulation of this information has been greatly increased confidence of life insurance companies in Tennessee as a field for their business. A signal instance of this is the erection in Memphis of a noble structure by one of the most noted companies in the world.

Not less noteworthy is the effect of this *Bulletin* in directing the attention of desirable emigrants to our State. One of the greatest treasures Tennessee can boast is its beneficent climate. Nowhere else has this life-giving wealth been so well displayed as in the sixty-six numbers of this monthly, steadily sent to those throughout the Union who understand its language and can appreciate its meaning.

Resorcin in Diphtheria.

One of the few of the numerous drugs introduced in recent years which has stood the test of time is resorcin, which has been chiefly used for skin complaints, but has also been found useful in whooping-cough. The *Lancet*, December 20, 1890, says that Dr. Andeer, of Munich, gives, in the *St. Petersburger Med. Wochenschrift*, 1890, a summary of its advantages in the treatment of diphtheria. He refers chiefly to French authors. Leblond and Baudier have shown, in an exhaustive treatise, that in resorcin we have an antiseptic of the first rank; it exerts a destructive influence on micro-organisms, even in extremely dilute solutions, and in spite of the rapidity with which it is absorbed and again excreted from the body. Its easy solubility in all fluids, its rapid evaporation by heat, in addition to the completeness with which it mixes with the air, without any discomfort to the patient, render it suitable for the destruction of all pathogenic micro-organisms. Roux and Yersin have conclusively demonstrated that diphtheria only attacks open wounds, consequently all further injuries to the parts attacked ought to be carefully guarded against, so that all mechanical modes of removing the diphtheritic membranes are to be avoided, and the same may be said of the use of drugs for a like purpose. The latter are particularly dangerous on account of any excess which may fall on healthy tissues, so preparing fresh ground for the morbid process. Any antiseptics which may be used ought to have no injurious effects on the parts not attacked. Such an antiseptic is a 10 per cent. solution of resorcin in glycerine.

Several severe cases of diphtheria have been successfully treated in this way by Leblond, Baudier, Besnier, Thorens, and others. They advise that the solution should be applied by means of a brush every hour during the day and every two hours during the night; also that the air of the room should be kept saturated by means of a spray apparatus containing a watery 5 per cent. solution of resorcin.

The conclusions to which the authors named above have come are as follows: 1. When the larynx is not affected the disease usually disappears in from six to ten days. 2. If the treatment is adopted at the commencement of the attack, the formation of membrane is very slight, and the larynx generally escapes. 3. In advanced cases, if the glands are swollen, and plaques of membranes numerous over the back of the throat, after forty-eight hours' treatment by resorcin the swelling of the glands begins to subside, and the formation of any fresh membrane is prevented. 4. In all cases the general state of the patient remains satisfactory, the sustained appetite and clear voice proving that there is no serious constitutional affection. 5. If the larynx is attacked, resorcin is not so bene-

ficial; nevertheless, the drug may still be used advantageously by fumigation and atomization if there is sufficient space in the larynx to prevent asphyxia, or if tracheotomy is likely to prove of permanent relief.

Army Medical Board.

An Army Medical Board will be in session in New York City during April, 1891, for the examination of candidates for appointment in the Medical Corps of the United States Army, to fill existing vacancies, numbering now five.

Persons desiring to present themselves for examination by the Board will make application to the Secretary of War, before April 1, 1891, for the necessary invitation, stating the date and place of birth, the place and State of permanent residence, the fact of American citizenship, the name of the medical college from whence they were graduated, and a record of service in hospital, if any, from the authorities thereof. The application should be accompanied by certificates based on personal knowledge, from at least two physicians of repute, as to professional standing, character and moral habits. The candidate must be between 21 and 28 years of age, and a graduate from a regular medical college, as evidence of which, his diploma must be submitted to the Board.

Further information regarding the examinations may be obtained by addressing the Surgeon-General U. S. Army, Washington, D. C. C. Sutherland, Surgeon-General U. S. Army.

Quill Drainage-Tubes.

Dr. Otis K. Newell, Surgeon to the Outpatient Department of the Massachusetts General Hospital, Boston, says, in the *Medical Record*, February 7, 1891, that Dr. Beach has used for the past two years, at his clinic, drainage-tubes made from large-sized imported goose-quills, such as are used for making the finer grades of camel's-hair brushes. The quills are taken without cutting off the dermal end, and perforated at intervals with an ordinary round leather punch. As shown in a figure, a delicate and smooth probe-pointed tube is thus provided, presenting the maximum lumen and minimum thickness of wall. This tube is made from a natural dermal appendage and is absolutely unirritating. It can be readily cut with scissors, and is not fragile like glass. It does not undergo any of the irritating chemical changes which are frequently seen where rubber tubes have remained for any length of time. These tubes are preserved in corrosive sublimate or carbolic acid solutions, and are easily sterilized.

Homœopaths Converted.

The *New York Medical Times* (a sort of homœopathic journal), in its issue for February 7, 1891, says: "Dr. Carroll Dunham, son of the late Carroll Dunham, M. D., for a long time Professor of Materia Medica, etc., in the New York Homœopathic Medical College, according to the *Medical Register* of the United States, is a graduate of the said homœopathic college of the year 1880, and of Bellevue Hospital Medical College of 1887, and is registered as a 'regular' physician residing at Irvington, N. Y. We are informed that Dr. E. K. Dunham, another son of the late Dr. Carroll Dunham, is also a 'regular' physician! We are told that several sons of the late Dr. Berens, a homœopathic physician of Philadelphia, are in the 'regular' school! The list could be extended! It certainly looks as if these gentlemen were not satisfied that homœopathic colleges in general teach the whole of medicine."

OBITUARY.

CHARLES WALTER, M. D.

On Thursday, February 12, 1891, Dr. Charles Walter died of pneumonia, after an illness of three days, at the premature age of twenty-five years. Dr. Walter was graduated from the Medical Department of the University of Pennsylvania, in 1888, and was elected one of the resident physicians to the Philadelphia Hospital, serving from August, 1888, until early in January, 1890, when he was elected permanent resident physician in the Insane Department, which position he held until the time of his death.

By his associates, to whom his untimely death will prove a severe blow, Dr. Walter was held in high esteem for his earnestness, his conscientiousness and his fidelity to duty.

But a few days ago, his assiduity was the means of saving a young life hovering at the point of death.

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Clinical Lecture.

NERVOUS DYSPEPSIA.—CHRONIC DYSENTERY.—MOIST GANGRENE.—FACIAL PARALYSIS.[1]

BY DR. ROBERT COLTMAN, JR.,

TUNG CHOW FU, CHINA.

Nervous Dyspepsia.

This man, 51 years old, is a physician who is practicing, without a diploma, a mixed system, embracing the humbugs of native origin and to some extent the science of Western medicine. His history is as follows. He has always lived a temperate life, has never been seriously ill, and has never had syphilis. Last August, during the cholera epidemic, he had a great run of cases, including his wife. Many of the patients died, and his wife, after an illness of three days, also perished. To loss of sleep, fright and grief, he attributes his present trouble. He is tall, slender and looks anemic. He says he sleeps poorly, and that his appetite is capricious and usually poor. His bowels are regular, but the stools are dry and somewhat scanty. He has a cough without expectoration. His tongue is large, thick and moist, but heavily coated with a whitish yellow fur. His pulse is irregular and intermits, losing on an average four beats per minute—that is to say, it drops out completely four beats. He tells us he has doctored himself for three months, and has got steadily worse, and now feels himself physically and mentally a wreck. He has taken quinine, muriatic acid, capsicum, castor oil, cod-liver oil, pepsin, pyrophosphate of iron, and any number of native drugs, and says he never felt any decided effect except when taking the cod-liver oil, which made him decidedly worse. His lungs are sound, and his heart, although intermittent in action, is also free from disease.

Now what is the matter? and what can we do for him? I reply he has nervous dyspepsia; and, as it is a recent case, we can probably effect a cure. First we want to disabuse the doctor of the idea he has, that his heart is badly diseased and that he is going to die. This we can do with such emphasis that he will readily believe us. Then as to medicines: we shall direct him to take a pill made up as follows:

℞ Ext. nuc. vom . . . . . gr. ¼
Aloes . . . . . gr. i
Myrrh . . . . . gr ss
Ferri sulp. exsiccat . . . . . gr. ss
Pulv. podophylli . . . . . gr. 1/15
Saponis . . . . . gr. ss
M. ft. pil. 1.

To be taken after breakfast and supper. He will also be given a powder containing pulv. digitalis and pulv. quininæ sulp., āā gr. 1, three times daily.

Chronic Dysentery.

The second patient is a man 54 years old, a farmer. This case also dates from August last. At that time the patient had a sharp attack of dysentery which was treated by native physicians; and although the violence of the disease abated, he has to this day some symptoms unrelieved. He says he gets along very well through the daytime, but invariably has to have from three to four stools at night, with more or less straining. Sometimes he passes a little blood and mucus with watery feces, and sometimes only mucus. He lives on hard bread, cabbage and millet. His diet is a matter of the greatest importance, for two reasons: First, he is nearly exhausted and cannot much longer sustain this tax on his strength on a vegetable diet; Second, his present diet is directly irritating to the intestinal tract, besides being difficult of digestion. We

[1] Delivered at the Presbyterian Hospital at Tung Chow Fu.

shall direct him to live exclusively on soft boiled rice, eggs—raw or under done—and broiled steak. He is to take a tonic containing a fluid drachm each of compound tincture of cinchona, compound tincture of gentian and tincture of cardamom, in a little water before each meal, and at bedtime a pill containing pulv. opii, gr. iss, and pulv. plumbi acet., gr. ij. Under this treatment we may hope for his restoration to health.

Moist Gangrene.

The next patient is a man 60 years old, a laborer. This poor fellow is in a pitiable plight, and I fear we can do very little for him. He is barely able to answer our questions; his mind seems benumbed, and it takes him some time to realize what we have asked him. The whole dorsal surface of his right foot is about to slough off, and the leg to the knee is infiltrated and swollen. He says four days ago the foot began to pain, and in that time it has reached this condition. I have seen but one or two cases of this nature, but feel sure that it is of the same nature as noma or rapid gangrene of the mouth or cheek. This man has been out of work for some time and starving; his blood has become so degenerate that now I fear the best tonics and alteratives will do him no good. The condition of his mind augurs ill, and I fear that in two or three days at furthest he will have passed away. His pulse is 60, his tongue pale and but slightly coated, but tremulous. He has no dropsy. He has no appetite. His temperature is sub-normal. Although this man walked in here with difficulty, and will be able to walk out, I regard him as in a dying condition, and shall have him placed in the wards. We will give him what seems to be indicated, namely, whiskey, quinine, eggs and beef juice; but the end is not far off.

It is only among the poorest class that such a disease is possible. It may be that syphilis has something to do in starting the ulceration, as it resembles phagedenic action more than anything else I have knowledge of. Amputation would be impossible in his condition. Locally we shall apply a poultice of flaxseed meal sprinkled with iodoform, partly as an antiseptic but principally to cover the odor which is penetrating in the extreme.

Facial Paralysis.

This man, 26 years old, is a school teacher. He comes to us for the second time, saying that he is much better than when he first consulted us some six days ago. At that time, although he strenuously denied that he had syphilis, I diagnosticated his case as facial paralysis due to gumma somewhere along the course of the facial nerve. He had gone to sleep at night apparently healthy, though he had been having more or less headache for a month previously, and awoke in the morning with his mouth all drawn to one side, and with dropping of the eyelid. He consulted us at once, and his rapid improvement is due to the fact that he was seen and treated early. If these cases are left to themselves they seldom manifest a tendency to improve, but go from bad to worse until finally imbecility and death ensues; but, if treated early and vigorously, the prognosis is very favorable, most of the cases making a complete recovery. It is important in these cases to mercurialize the system as rapidly as possible, and to maintain the impression for several weeks, after which the mercury should be exhibited in minute doses intermittently for a year or so. If the stomach is weak or irritable, I use inunction of blue ointment twice daily; but where—as in this case—the man is strong and has a good stomach digestion, I prefer to administer mercury by the mouth. This man has been taking one-eighth grain of corrosive sublimate and ten grains of iodide of potash three times daily. We will now decrease the corrosive sublimate to one-tenth grain per dose and renew his medicine for six days.

I remember a rule of practice taught me in college, which was: In all cases of facial paralysis occurring in a subject under thirty years of age to suspect syphilis. In ten years' practice I have yet to see an exception to this rule for diagnosis.

Dangers of Illuminating Gas.—It has been shown that respiration of the products of the combustion of an Argand burner produces upon animals only deoxygenation, because in this case combustion is complete. It produces only carbonic acid, and not carbonic mon-oxide. If, on the contrary, the combustion of the burner is incomplete, it gives birth to acetylene and a larger quantity of carbonic mon-oxide. Intoxication is rapid in this case. It results from these experiments that it is necessary to remove the products of combustion from ordinary gas burners as well as from gas stoves.

COMMUNICATIONS.

PEROXIDE OF HYDROGEN FOR CLEANING THE HANDS.

BY CHARLES P. NOBLE, M. D.,
SURGEON IN CHARGE OF THE KENSINGTON HOSPITAL FOR WOMEN, PHILADELPHIA.

The remarkable properties of the peroxide of hydrogen as a pus destroyer and as a cleansing agent are becoming better appreciated every day. Every one who uses this agent in the treatment of suppuration becomes enthusiastic in its praises. This being true, time only is required to overcome the prejudice against it which heretofore has existed among the profession as a whole.

I wish at this time to call attention to the use of the peroxide in cleansing the hands. It is a demonstrated fact that it is impossible to render the hands surgically clean, that is, free from septic germs, by the use of soap and water, the nail-brush and corrosive sublimate solutions. Germs still remain under and about the finger nails. It seems more than probable, although I know of no experiments to support the supposition, that germs will find the most secure hiding-place about the finger nails, when the skin has been made rough and thick about the nails, by excessive use of the hands, or by their frequent exposure to irritating fluids, as corrosive sublimate solution. For some months, in preparing for abdominal sections, I have used the peroxide of hydrogen solution in full strength, to assist in cleaning my hands, especially about the finger tips and nails, whenever, for any reason, I have felt doubtful about their aseptic condition. The peroxide has been used whenever the skin about the nails has not been in good condition; and it is remarkable to see how it will soften horny skin at the side of the nail, and disintegrate *débris* in the subungual space, or macerate and even remove epidermic scales. There can be no doubt that foreign material can be removed from the fingers much more completely by using the peroxide solution after using soap and water and the nail brush, than by the use of these agents alone. This certainly does *promote* asepsis. But whether the hands are made aseptic by the peroxide solution I have not been able to determine. Careful bacteriological experiments to determine this question will be of great practical interest and value.

The method which I employ for rendering the hands aseptic is as follows: The nails are trimmed reasonably short, and the subungual spaces are cleared with the knife blade. The hands and forearms are then thoroughly washed in warm water, a good lather being made with soap, and a stiff nail brush being vigorously applied. The water is renewed three times. The hands are next soaked in a saturated solution of permanganate of potassium, and this removed by soaking them in a saturated solution of oxalic acid. According to circumstances, the finger tips are next soaked in peroxide of hydrogen, for the final bath corrosive sublimate solution 1-1,000 is employed. The hands remain in the sublimate solution three minutes. At least ten, and often fifteen minutes are consumed in the cleansing process.

To those who are accustomed to wash the hands quickly, use the nail brush lightly, and to *dip* the hands in the sublimate solution, such elaborate and painstaking care doubtless appears like a useless expenditure of energy. But bacteriological experiments have shown that germs exist about the nails of fingers cleaned in this careful manner (omitting the peroxide solution) and have demonstrated the necessity for some more reliable method of rendering the hands aseptic, if the antiseptic conscience is to be satisfied. It is with the hope that the peroxide of hydrogen solution will meet this demand that I have brought the matter forward.

Aside from using the peroxide solution in preparing the hands for abdominal operations, I have found it perfectly reliable in removing foul odors and stains from the hands, by contact with decomposing pus, discharges from cancer, and other septic fluids. I believe it will be equally useful to the general surgeon and obstetrician.

MEDICAL COLLEGES OF VERMONT.—BOGUS AND GENUINE.

BY JOHN M. CURRIER, M. D.,
NEWPORT, VERMONT.

Just now we are having quite an epidemic of bogus medical colleges in some of the smaller towns of Vermont. Some of these were unknown to the medical profession of Vermont until the Censors of the Vermont Medical Society received letters from the Censors of some of the medical societies of the Western States, inquiring about the standing

of these institutions. The graduates of these institutions settled in the far West, thinking they would never be molested; but now and then they are required to present their credentials to some State Board of Censors, and are thus shown to be possessors of bogus diplomas, and frauds upon the public, and their standing as to medical knowledge and proficiency is brought to light.

For the fair name of the medical profession of Vermont I propose to give a short history of the various medical colleges of the State, both bogus and regular, those that have existed and those now in operation. This history may be of service to practitioners, living in the far West, who are striving to elevate the standard of medical education, and to protect the public from the impositions of uneducated practitioners and charlatans.

Of the four bogus institutions that have actually issued diplomas, only one makes any pretence to delivering lectures or possess any building or room suitable for imparting instruction to a class of medical students. The citizens of those towns in which these institutions purport to be located were not aware of the existence of them until they were exposed by the secular newspapers. Even the members of the regular profession, living in the immediate vicinity, were unaware of their existence. They seem to be carried on by one leading spirit in each case, clustering around him names enough for a Faculty and Board of Trustees. In the majority of instances these names were obtained on some pretence, to act as trustees or officers, without knowing that they were to be connected with a bogus medical college, while the Dean of the faculty was gathering in the profits from the sale of diplomas. Some of these institutions have been exposed by the secular press, when the greater portion of the faculty and trustees learned for the first time that they were at the head of a learned institution; and credit is due to many of them, for immediately appearing in a letter of explanation, disapproving the institutions with which they were unwillingly connected.

I will mention first the four bogus colleges, then the three regular institutions that have been chartered by the Legislature.

Union Medical Institute.

In the *Argus and Patriot*, of Montpelier, under date of November 19, 1890, appears an article quoting from the *Boston Herald* an exposure of "The Union Medical College" of Newbury, Vt. It also adds some comments of its own. The report states that at the session of the Legislature of 1886 a bill was passed by the House incorporating a Homœopathic medical college to be located on the east side of the State; but it was killed in the Senate. Dr. George B. Hatch was said to be prime mover in the scheme. The proposed college failed to obtain legislative sanction, but the scheme was not abandoned by Dr. Hatch, who seems to have determined to do business on his own account, regardless of the State.

Recently, however, a reporter of the *Boston Herald* got hold of what purported to be a catalogue of "The Union Medical College, of Newbury, Vt." This pamphlet was about 4 by 6 inches in size, contained some 16 pages, and was printed by C. E. Caswell, a 17-year-old amateur printer at Warren Summit, N. H., a hamlet of perhaps a dozen houses. Caswell says he printed 300 for $7, but has only received $5 of his pay, although the books were delivered in June, 1889. He says that Hatch, for whom the work was done, suggested that nothing be said about the job. The cover bears the name of the alleged college, as given above. The second page contains the list of Trustees, Officers and Faculty.

The President of the Board of Trustees is Horace W. Bailey, a grocer and Town Clerk of Newbury, a man of good reputation and good business ability, but with none of the requisites usually thought indispensable in the President of a medical college.

The Daily Journal of Montpelier, under date of November 7, 1890, makes further allusion to the matter as follows: The leading spirit in the college is Dr. George B. Hatch. There is no doubt that several of the men whose names are used were deceived as to the nature of the college, for they stand high in their respective communities. The institution has never had a student, nor has it a location at Newbury, so far as we know. The *Herald* says it is the general opinion that diplomas are being sold in the West, and one prominent business man made this statement: "It is susceptible of proof that two diplomas have been sold for $50 apiece."

At a later date appeared the following: H. W. Bailey, of Newbury, who was advertised as the president of the bogus medical college up there, writes a letter that exoner-

ates him from blame. He consented to act as trustee only for a genuine institution, and never consented to the use of his name as president. Dr. G. B. Hatch, the concocter of the thing, claims that no diplomas were ever issued, but that he had an idea of starting such an institution at the Montebello Mineral Spring, got encouragement from a "Southern gentleman" as to capital, and had a few catalogues printed as sort of samples, but allowed only a few copies to go out.

Dr. Hiram A. Cutting, A. M., M. D., Ph. D., of Lunenburgh, is a scholarly man, mostly self-made. For many years he was State Geologist of Vermont, and Secretary of the State Board of Agriculture; and has lectured much at agricultural meetings, and before various colleges. His three degrees are honorary. About this college he writes me: "There is no medical college at Newbury and never has been, to my knowledge. I received a letter something more than a year ago from one Dr. Hatch, of Newbury, saying that a friend of his from the South was talking of purchasing the school property and Medicinal Spring at Newbury and they might get up an institute class, and if such was done, he desired me to give two or three lectures on microscopic work, etc. I wrote him I would try and do so. The next I knew was that the project had fallen through. I have lectured before various colleges upon the microscope, mounting objects and the microscopic advantages in anatomy, etc., but was never president or official board member of any."

It seems that Dr. Hatch, who is not a graduate of a regular school, after the medicinal spring scheme fell through, turned his attention to the sale of diplomas. Of his capacity for study, a friend writes me: "Dr. Hatch commenced the study of medicine with Dr. E. V. Watkins [of Newbury] some years ago, but did not continue with him in that capacity only about three weeks, when Dr. W. told him that he could never succeed unless he would devote all his time and talents to the study for years, and at that time Hatch gave up the idea of studying medicine, and left for other fields."

Shortly after his return to Newbury this new medical plant came quietly into existence, *sub rosa*. It was full-grown when first discovered. But since its exposure in the newspapers the members of the faculty either keep silent or deny their connection with it.

The exposure of this and other bogus colleges will have the effect to check the immediate sale of diplomas; but as soon as the excitement in the medical profession dies down, traffic will revive with renewed energy. The newspaper exposure will make them more noted, and those who desire to possess diplomas, without regard to standing, have learned where they can be purchased, and avoid hard study. The Legislature of Vermont has done a bad thing, or rather has neglected to do a good thing, for the medical profession of the State, at its recent session. A bill was introduced making the sale of bogus degrees a penal offense; but it failed in its passage. I have been informed that if the bill had been designed simply to prevent the sale of diplomas it would have passed, but it was so framed with other matters that were objectionable that the subject of degrees could not be singled out, so the whole matter was "heaved over among the rubbish," by the disinterested representatives. The outcome of this unwise legislation will be a large crop of bogus diplomas from Vermont for the next two years.

Trinity University.

Under this title the State Censors have received letters from the censors of some of the Western States inquiring into the standing of the institution. No such an institution exists there.

Medical College at Newfane.

I am unable to find the name of the Medical College at Newfane, but inquiries have been made as to its standing, recent graduates having occasion to bring forward their diplomas, and were thus brought to light. No College exists there. It is a small obscure town.

Vermont Medical College.

This concern was located in Rutland about 1883. Dr. George Dutton is the originator and the principal man. It should not be confounded with the Vermont Medical College that existed in Woodstock between 1824 and 1856, which will be reviewed later on in this article. This Rutland plant is located in a room, secured by the Dean for the purpose, of sufficient size to accomodate only a few students. Lectures are delivered annually, but they are superficial, erratic, lacking in method, in

fact, worthless to a student obtaining knowledge for practice. The students are of an inferior grade intellectually. This school claims to be a chartered institution, but it is not. The State of Vermont several years ago, passed an act by which an organization could be formed having privileges similiar to a corporate body, without making direct application to the Legislature. These privileges were, however, somewhat restricted. Under this law the Rutland school was organized, and claimed to be a corporate body. There seems to be nothing hidden about it in its movements, on the contrary, the managers seek publicity and notoriety. They have been defiant and pugnacious, taking advantage in every spot and place to defend the institution from attacks. The past summer they graduated a class; and they took great pains to make a display, all the medical fraternity of the State and the public were invited to attend the graduating exercises. Each graduate read a paper on some medical subject, on the occasion. The reporters of the press were on hand, and some of them published quotations from the medical essays read, which reflected upon graduates unfavorably, and afforded much amusement to the physicians who read the reports.

One of the graduates of the institution desired to settle in the State to practice; but before she could do so, the law required that she must have a certificate of qualification from some Board of Censors of a medical society, recorded in the County Clerk's office. She made application to a Board of Censors for the certificate, and the Board refused it. Suit was brought to constrain the Board to issue a certificate; but the Courts decided against the application.

It has been charged that the school was of a "spiritualistic" nature; but the "*Faculty*" every time came forward with a denial. It has been noticed, however, that Dr. Dutton attends the "spiritual" conventions quite frequently, and distributes circulars and announcements of that school very extensively.

Application was made to the Legislature of Vermont for a charter of the Rutland school, but it was refused in the House of Representatives by almost a unanimous vote. Thus it will be seen, that not only the Courts, but the Legislature also, has set this school down as a bogus institution, and its diplomas are worthless, and a stigma to the possessor.

Castleton Medical College.

In 1881 I prepared a history of the Castleton Medical College for the first volume of the proceedings of the Rutland County Historical Society. From that volume I make such extracts as will be of service to medical censors throughout the United States. I was in possession of the written records of that institution from its origin, and the most complete file of the catalogues of it that was in existence in any library. That institution was chartered on October 29, 1818, as the Castleton Medical Academy. Drs. Selah Gridley and Theodore Woodward, of Castleton, were the real founders. By an Act of the Legislature passed on November 7, 1822, the name was changed to the Vermont Academy of Medicine. By an Act of the Legislature, November 1, 1841, the name was again changed to Castleton Medical College. The first course of medical lectures was delivered in the winter of 1818–19; the last course was delivered in the spring of 1861. The war of 1861–5 put an end to its existence. There were no lectures delivered in 1838 and 1839. Up to and including 1827, degrees were conferred upon the graduates under the auspices of Middlebury College. After that date diplomas were issued by the faculty of the college independently of Middlebury College. Many eminent physicians graduated from this college, and all were in good standing in the profession. Many of the graduates are still in active practice.

Vermont Medical College.

This institution was started through the influence of Dr. Joseph A. Gallup, at Woodstock. The first course of lectures was given in the autumn of 1827. It received the name of the Clinical School of Medicine. For three years the graduates received their degrees from Waterville College, in the State of Maine. In 1830, a connection was formed between that institution and Middlebury College, from which the graduates received their degrees until 1836. In October, 1835, the Legislature of Vermont granted a charter to the Woodstock school under the name of the Vermont Medical College, with authority to grant diplomas to its graduates. Lectures were given annually in the spring, until 1856, when the last course was delivered; and its existence ceased then. The graduates of this institution stood well in

the profession, and some became eminent as medical teachers in other schools.

MEDICAL DEPARTMENT OF THE UNIVERSITY OF VERMONT.

This is the only college in Vermont that now delivers medical lectures and issues diplomas to any medical graduates. It is in a flourishing condition and is careful to graduate only those found to be competent to practice. In the autumn of 1822, the first full course of medical lectures was delivered. These lectures were continued annually up to 1833, when they were suspended. In 1854, the department was again revived, and it has continued to increase up to the present time.

The three last-named colleges are the only ones that have been authorized to grant diplomas in the State of Vermont. All other before mentioned are bogus.

GENERAL ANTISEPTIC MEDICATION.[1]

BY H. F. SLIFER,

NORTH WALES, PA.

I desire to bestow some consideration to the subject of general antiseptic medication. It is my object to present to the Society the use of antiseptics in general practice, not confining my remarks to antiseptic surgery, which I regard as only a part of the antiseptic treatment.

Sepsis is that morbid condition produced by the absorption of toxic matter into the tissues or blood. Three primary factors are engaged in the production of this pathological condition: 1. Micro-organisms; 2. Ptomaines; 3. Leucomaines.

The recognition of micro-organisms as the essential cause of specific disease, supplies a scientific basis for diagnosis, and affords a definite principle by which we are enabled to test methods of treatment. The existence of putrid fermentation, taking place in the tissues of the body, is proved by the following evidence: 1. The presence of certain micro-organisms; 2. Certain cadaveric alkaloids—ptomaines, the product of putrefaction; 3. Certain special products—leucomaines, which originate in the living tissue as a result of retrograde metamorphosis. These are divided into two groups: the uric acid group, and the creatinine group.

It has been seen that it is not the organisms themselves that are the irritants that directly cause disease, but the products that are formed in the course of their growth and multiplication, either directly secreted by them or formed by the decomposition of the substances on which they feed. From these facts we can draw this important conclusion: That man in the physiological state produces poisons, more or less virulent, the true nature of which we do not as yet understand, and that the condition of health for him consists in their regular and rapid elimination by the different emunctories, and especially by the skin, the kidneys and the intestines; nor must we omit to mention that colossal eliminator of impurities, the liver, which has for its function the destroying of a certain number of these toxic alkaloids. But let some circumstance come to interrupt this equilibrium, let the skin close its life-giving gates; let the liver cease its function; let the glomeruli of the kidneys become obliterated; let too active an absorption take place from the intestines, whether by abnormal shedding of its epithelium, or by the presence of ulcerations, or by want of power on the part of the digestive ferment sufficiently to prevent the production of putridity and fermentation, and then may ensue a pathological condition which we will term sepsis.

The agents with which we antagonize and destroy the above enumerated toxic products are termed antiseptics. This system of medication is destined to have a high place in the therapeutics of the future, and should be studied and practiced by every physician and surgeon. I propose to make some practical application of this method in diseases as we meet them in general practice.

In the different forms of stomatitis, it is of primary importance to maintain perfect cleanliness, by keeping the teeth well brushed and by frequent washing of the mouth, especially after taking food. The most effective washes for this purpose are: boric acid, carbolic acid, chlorinated water, solution of permanganate of potassium, bicarbonate of soda, and creoline. When the gums are tender and disposed to bleed, astringents are indicated. If ulceration is present, the mouth should be washed as above indicated, and the ulcer dusted with iodoform, charcoal, or boric acid; or a lotion of carbolic acid, sulphate of copper (two grains to the

[1] Read before Montgomery County Medical Society.

ounce), or nitrate of silver (five grains to the ounce), chlorate of potassium or bichlorate of mercury (2 to 1,000) should be applied.

In diphtheria we have a local as well as a constitutional pathological condition presented, in which the antiseptic treatment is especially applicable, and this, if properly carried out, will produce excellent results. In mild cases I use the inhalation of steam and lime, or steam and carbolic acid, alternating with a gargle of chlorate of potassium or borate of soda. In cases of graver import, I use medicated steam with a gargle of bichlorate of mercury (2 to 1,000), bromide of potassium, or bicarbonate of sodium with alcohol or whiskey, from which I have had excellent results. Recently, I have used sulpho-calcine with great satisfaction. The direct application of this drug on cotton, or with a camel's-hair brush, or as a spray, in its concentrated form, will often remove or dissolve the membrane. The use of iodoform, mineral acids and vegetable astringents has failed in my hands.

In the nasal complications, the injections should be made every four hours or oftener if necessary; at the same time it is advisable to be careful that the fluid does not enter the Eustachian tubes. This can be prevented, to a certain extent, by compelling the patient to keep the mouth open during the operation. In selecting the drug for this purpose, it is well to avoid those which stain or produce a firm coagulum. For this reason I employ carbolic acid, bicarbonate of sodium, borate of sodium and bichloride of mercury.

Prof. Alfred L. Loomis speaks highly of the benzoate of soda, to neutralize the diphtheritic poison. Dr. Geo. B. Fowler considers calomel the best remedy with which to combat this terrible malady. Dr. A. Jacobi advocates turpentine. Dr. J. Solis Cohen regards the chlorine compounds as of more efficacy in diphtheria than all other remedies.

I have had no personal experience with benzoate of soda, calomel and turpentine in diphtheria; but coming from such eminent authority, I am inclined to give them a test as soon as an opportunity will present.

The efficacy of antiseptic treatment, in diseases of the stomach, depends materially upon the manner in which it is executed; the more thoroughly the stomach is washed out, the greater will be the success. In dyspepsia and chronic gastritis the following drugs are indicated: carbolic acid, salicylate of bismuth, subnitrate of bismuth, salol, iodoform, charcoal, carbon bisulphide water, and hydrochloric acid. In gastric ulcers, charcoal, small doses of calomel and nitrate of silver are the most efficacious remedies. The food and drink must be boiled or sterilized, and selected with especial care, and adapted to the peculiarity of each case.

Dr. Bouchard has the credit of first attempting intestinal antisepsis. He treated his typhoid fever patients with a mixture of charcoal and iodoform, and naphthol in large doses. Dr. Dujardin-Beaumetz, is perhaps one of the strongest advocates of this form of intestinal treatment. He says: "The physician can, and ought to interfere, to combat these intestinal septicemias, and he attains this end in employing two kinds of drugs: one kind which has for its object to prevent putrid fermentations from developing in the digestive tube, and to destroy the toxic elements which are formed there; another which has for its end the favoring of the rapid elimination of this matter from the intestines. Let us examine each of these indications, and the indications designed to fulfil them, commencing with the last. The indication to eliminate the toxic matter found in the digestive tube, and to favor their speedy issue, is fulfiled by purgation. Medical agents which are capable of modifying the putridity of intestinal matter, we find may be introduced by two channels: either directly into the intestines by means of enemata, or indirectly by the mouth. The antiseptic substances which can be used by enemata are not very numerous, on account of their irritant and toxic action. To avoid this, we are obliged to employ substances which are but slightly irritating and toxic, such as salicylic acid, boric acid, cupric sulphate.

"These injections have no toxic effect and they disinfect perfectly the contents of the large intestine. Their action is, however, local, and you should endeavor to medicate the entire intestinal tract; and for this purpose substances should be introduced by the mouth. Among the drugs worthy of being advised for this object, there are three to which I desire to call attention, namely, charcoal, iodoform and carbon bi-sulphide water."

Dujardin-Beaumetz also speaks in high terms of salicylate of bismuth, associated

with magnesia or bicarbonate of soda, with naphthal or salol in diarrhœa.

It is evident, that the best results are to be realized from drugs that are slightly soluble. Only insoluble drugs can be depended upon to reach the lower part of the intestines. In diarrhœa in which the putrefactive processes are marked, as indicated by flatulence and offensive stools, I have had good results from the use of salicylate of bismuth, charcoal, iodoform and salol; in other cases carbon-bisulphide acted more promptly.

In cholera infantum, the antiseptic treatment consists in: 1. Unloading the bowels. 2. Feeding the child on sterilized food; and 3. Antiseptic drugs. I use one of the bismuth salts, or sulpho-carbonate of zinc, iodoform, or small doses of calomel.

In chronic diarrhœa antiseptics are of very little avail, indeed they have proved unsatisfactory.

Dr. Lemoine, of Algiers, has treated fifty-four cases of dysentery with enemata of corrosive sublimate, with the happiest results. The strength of the solution was one to five thousand, of which two hundred grams were at first administered three times a day. In acute cases, a cure resulted from this treatment in from three to four days; in no case was there any sign of systemic poisoning. In view of the infectious character of dysentery, this treatment is eminently rational, and the demonstration that our most powerful germicide can be used with impunity as an intestinal antiseptic is of decided value.

The antiseptic treatment of phthisis has thus far been unsatisfactory. The higher authorities do not recommend it. All that we can reasonably expect from antiseptic inhalations, is that they may decrease the infective power of the secretions and counteract the offensive odor of the breath and expiration.

It is in obstetrics that the antiseptic method of treatment is especially indicated. The Chicago Medico-Legal Society recently discussed the question: "Whether the failure of a physician to accept and practice the precepts of antiseptic midwifery should make him legally liable and responsible if puerperal fever develops in his puerperal patient during his attendance upon her." It seems to me that the obstetrician is in a high degree responsible for unfortunate results. We find, on examining statistics, that the mortality of puerperal diseases has greatly decreased since the institution of the antiseptic treatment.

Dr. William T. Lusk reports in the *Medical News:* "The number of deaths from puerperal sepsis, between the years 1867 and 1875, in New York City, was 1,947, or an annual average of 215." This is the result under the old system. In the same article, Dr. Lusk says: "During the past five years there have been 837 women confined in the Bellevue Hospital, and there have been sixteen deaths, two of which were due to puerperal fever." These figures most emphatically show the value of the antiseptic principle.

In the address on obstetrics before the last meeting of the American Medical Association, the following statement was made: "There are a few simple rules pertaining to the subject of aseptic midwifery, and they must be scrupulously and delicately adhered to by every physician who practices the obstetric art. Failure to do this is to shoulder an awful responsibility, and the consequences of such neglect would be indefensible, either in a court of morals or of law."

It behooves us, therefore, as general practitioners, to exercise every precaution, and to utilize every means at our command to prevent sepsis.

This happy end we attain in two ways. First, asepsis; second, antisepsis. Asepsis we secure by scrupulous cleanliness—not æsthetic, but chemical cleanliness on the part of physician, nurse and patient. The clothing of the physician and nurse should be perfectly clean and free from contaminated air imbibed from the dead-house, or hospital wards, or the rooms of patients in which diphtheria, erysipelas, septic wounds, or the eruptive fevers are being treated. The hands and fore-arms should be washed with hot water and soap, then in an antiseptic solution; and special attention should be given to the finger-nails. The patient must also undergo a cleansing preparation, the abdomen, the thighs, the labia and the anus must be thoroughly washed with soap and water, and finally, with an antiseptic solution—alcohol or bichlorate of mercury.

Antisepsis is secured by the introduction of agents that destroy the toxic matter, and remove the devitalized substances, and those prone to decomposition. These agents are indicated after abortion as well as after labor.

If the labor is perfectly normal, and there is no danger of sepsis, I use one injection-

daily of the bichloride solution (1 to 5,000), or carbolic acid (1 per cent.), or chlorinated soda, or permanganate of potash.

In case of any operation, such as version, the application of forceps, or any manipulation by means of which air is admitted, the douche of sublimate solution must be used. The parts are dusted with iodoform and covered with a piece of gauze wet with 1 to 5,000 bichloride solution, or carbolic acid solution, or chlorinated soda.

In surgery we more clearly attain the ideal excellence of antiseptic treatment than in any other department. There we are enabled to apply the antiseptic agents directly to the seat of infection, and to destroy the toxic influence and restore the parts to an aseptic condition. All operations should be performed with the strictest antiseptic precautions. The region to be operated on is cleansed with soap and water, ether or turpentine, and carbolized water (3 per cent.), or bichloride of mercury (1 to 1,000) and is then covered with a towel saturated with bichloride solution until ready. The instruments are sterilized by exposure to steam, or by being placed in boiling water, and are then laid in a 3 per cent. carbolic acid solution. During the operation the instruments, when not in use, should be placed in carbolic solution, or on a towel saturated with sublimate solution. The same precautionary measures must be taken with needles, sponges, etc. The hands of the operator should be washed with soap and water, and alcohol or turpentine, and then with bichloride solution, care being taken that the nails are chemically clean. The operation being completed, the bleeding vessels are secured with carbolized ligatures, or those prepared in oil of juniper, which have been in the bichloride solution for twenty minutes. The wound is now irrigated with bichloride solution. The edges are adjusted, and secured with sutures. The cavity of the wound is again irrigated with an antiseptic solution. The wound is then freely dusted with iodoform, followed with a layer of cotton, saturated with a solution of carbolic acid or the bichloride. This in turn is covered with two or three layers of antiseptic gauze. This may be covered with oiled silk, or oiled muslin, or oiled paper, or rubber tissue. Over this a layer of antiseptic cotton is placed, and then the roller bandage. If no discharge or bleeding is perceptible, this dressing can remain for a week without redressing.

It has been asserted that antisepsis could not be carried out in general practice. This I regard as an error. Since the method has been so much simplified, the cumbersome spray apparatus has been abandoned, and the complicated dressings have been discarded, we are enabled to practice it under all conditions and circumstances, let us therefore, bear in mind the principle of the antiseptic treatment, and do the best we can with the means at our command.

VESICULAR ERUPTION IN SCARLATINA.[1]

BY F. C. CURTIS, M. D.,

ALBANY, NEW YORK.

The importance of any unusual deviation from the ordinary character of the eruption in one of the exanthemata calls for its report and record. The following is the report of a case of scarlatina, in which a vesicular eruption developed.

The patient was a stout, well-developed child, four years of age, of German parentage, and the youngest of a family of several children. On November 29, after having been perfectly well all day, he was taken suddenly towards evening with vomiting, fever, and, later, diarrhœa. The next morning a scarlatinal eruption appeared, which became well marked and presented no unusual characteristics during that or the two succeeding days. At the request of his attending physician, Dr. William Hailes, I saw him in the evening of December 3, the fourth day of sickness. He was having scarlatina of moderate severity; his pulse was rapid; his tongue had the red, strawberry appearance; the throat was congested. His face was clear of eruption, and on the chin and neck was beginning to peel. The body and limbs were covered with a deep scarlatinal eruption, fading on deep pressure except at punctate points, the color returning slowly. The abdomen was covered thickly with petechial, pin-head sized, acuminated vesicles, closely set so as to impart a rough feeling to the touch, and of a whitish color. Similar vesicles covered the inside of the thighs, but less thickly set. A few scattered vesicles were on the chest, none on the back, neck or face. On the

[1] Presented at the meeting of the Medical Society of the State of New York, February 3, 1891.

arms there were a few here and there, but about the elbows they were more numerous. On the wrists and back of the hands, however, there were vesicles differing much from those on other parts in regard to their size; they were large, about the size of a split pea, many were of irregular outline as if formed by the confluence of several vesicles; they were flat, superficial, and their contents were turbid and whitish as if semi-purulent. They involved about one-half of the area of tissue of these parts. At first glance they presented much the appearance of small-pox on the fourth day of eruption; they were lacking in a solid raised edge of a vesicular papule and were not acuminated. This new eruption had developed without apparent accession of fever.

December 4. The vesicles on the abdomen and thighs had not developed beyond this pin-head size, and extended over no greater area. The skin covering the knees had the large flat turbid vesicles found the day before on the wrists, and they were thickly set. Those on the wrists were unchanged, but had extended up the ulnar side of the arms. They appeared to cause no inconvenience to the child. The body was still quite red.

December 5. On the abdomen the vesicles had almost entirely disappeared by absorption, and at their sites were scales yet adherent. About half of the vesicles on the hands and arms had disappeared by absorption. None had been ruptured or torn by scratching. On the knees the vesiculation was still active. The vesicles of the knees and wrists had appeared upon the ankles, and were quite similar in every way. Between joints there were only few vesicles. The redness of the entire body was fading, and there was but moderate febrile action.

December 9, four days later, the child was up and dressed. The vesicular eruption had entirely disappeared, and at the sites of the large and profuse vesiculation the cuticle was peeling actively in large, thin flakes, aside from which there was no mark to indicate their former existence, they having entirely disappeared by absorption. A more furfuraceous exfoliation was going on over the covered parts of the body. The tongue was still red and showed elevated papillæ, and the fauces were still congested. The child subsequently made a perfect recovery without accident, and there were no other cases of scarlatina in the family.

Pathologically, the eruption of scarlatina is a dermatitis. While the efflorescence is due to general engorgement of the cutaneous vessels, there is always a larger degree of engorgement of the capillary loops in the papillæ of the derma, producing the pin-head sized reddish points seen at the commencement of the eruption and the small, red points which often cover the blanched spot remaining after pressure upon the scarlatinous skin at its height. Sometimes these papillæ are so congested as to impart a rough sensation to the touch. The production of vesicles may be accounted for in pursuance of this pathological process, the engorgement of the papillary capillaries being such that relief may be found, just as in other conditions of dermatitis, by escape of serum and the formation of a vesicle. It would appear that lymphoid corpuscles also escape and produce the whitish appearance that is noted. This would better satisfy the conditions, apparently, than that they are produced as a miliaria, occurring in any febrile condition from follicular inflammation, the sudamina of fever or the prickly heat of hot weather. It is exactly in keeping with the production of scarlatina hemorrhagica, where minute points of reddish-brown color, not obliterated by pressure, develop from escape of blood-globules from the congested papillary capillaries. The occurrence of the vesicles at parts where the dermatitis is most intense, and the whitish appearance of their contents, add force, in a case such as that reported, to this pathogeny.

The literature of this anomaly of scarlatina is scant. It is not detailed with that completeness which would be looked for in consideration of its importance, for while it is referred to very casually as a possibility by Robinson, Hebra, Meigs and Pepper and Bussey, in Keating's *Cyclopedia*, by which author a miliaria eruption is referred to casually, by many writers even of elaborate and compendious articles it obtains no notice. Its importance as a possible occurrence in a common exanthem, usually regarded as altogether an efflorescence, should be recognized and made familiar to the profession.

17 Washington Avenue.

—It is said that the unpleasant symptoms sometimes associated with the continued use of iodine may be prevented by the daily administration of fifteen grains of bicarbonate of soda.

PERISCOPE

Life-Saving Methods in Still-Births.

At a meeting of the Section on Pediatrics of the New York Academy of Medicine, December 4, 1890, Dr. William T. Lusk read a paper in which he said that a few weeks ago he had been called to the bedside of a primipara in labor. The child's head was low in the pelvis, but for two hours there had been no progress. Extraction of the head by the forceps was easily accomplished, but the cord was found tight around the neck. It was divided with scissors, and the body was extracted. The child, however, had become asphyxiated, respiration had ceased, the heart-beat was scarcely perceptible. He placed the child upon a table, wrapped in warm cloths, expelled the mucus from the posterior fauces, passed a No. 8 English catheter into the trachea, and removed mucus by suction. The quantity of mucus in the bronchial tubes was large, and the catheter had to be introduced many times. Direct inflation was then practiced, and in ten minutes slight heart movements were observed, but these ceased again, and life saving methods had to be continued for nearly three hours before respiratory movements were finally established. These methods consisted in removal of mucus from the bronchi, inflation through the catheter, warm-water baths with sprinkling of the epigastrium with cold water, and the use of Schultze's and Sylvester's methods alternately. Before using Sylvester's method it had been necessary to draw the tongue forward and depress the base. The next day the child had spasms, but recovered after twenty-four hours, and remains to-day robust and the joy of a family.

He would grant that the story was a familiar one, but its importance led him to bring the subject before the Academy on this occasion. According to his observation, the method usually pursued was to spank the child, wrap it in warm cloths, or dip it alternately in warm and cold water, and lay it away to die. But to manage these cases successfully required perseverance and a knowledge of the physiological laws involved.

It was known that during the period of gestation the child remained in a state of apnœa; that the respiratory function was performed by the placenta. But as soon as the child was born, in normal cases, the thorax expanded, the diaphragm contracted, pulmonary respiration was established. The premature establishing of pulmonary respiration while the child was still in the passages was followed by asphyxia, and was generally the cause of still-births. The author here mentioned the two prevailing theories regarding the cause of respiration taking place at birth, and also cited the experiments of Engstok made on guinea-pigs and other animals, which demonstrated that fetal respirations were excited in the absence of external sources of irritation so soon as the blood in the umbilical veins became darkened or was cut off from the fetus. Peripheral stimuli, however, were capable of exciting the respiratory act before the internal stimuli had increased sufficiently to induce independent action.

After describing the fetal circulation, Dr. Lusk said that, owing to the less amount of blood supplied through the placenta during contractions of the uterus before birth, the respiratory centre in the medulla received less arterialized blood, became more irritable, and this, with the friction upon the body of the child as it passed through the genital tract and came in contact with the air, caused the first respiratory act to take place. This was accompanied by expansion of the chest, opening up of the pulmonary air-cells and of the blood-channels distributed to the lungs, which before had been nearly closed. The blood, therefore, which had before passed from the right ventricle directly to the aorta, was now directed to the lungs. This caused diminution in blood-pressure in all the vessels of the body, the pressure being partially compensated for by aspiration in the vena cava with the acts of respiration. Since the blood, after respiration had set in, was most diminished in the ductus arteriosus, this channel soon became obliterated. In the regular channels the diminished pressure was most marked at a distance from the heart. It was particularly noticeable in the umbilical arteries, the pulsation here often being scarcely perceptible after the child had breathed a few times.

In cases of asphyxia it was somewhat different. In nearly all cases of asphyxia after birth the child had breathed in utero. Intra-uterine respiration was due to tetanic contractions of the uterus, a condition oftener seen when it was more common to give ergot before birth of the child; to premature death of the mother; but oftenest of all, to pressure upon the cord. Cutting off the

blood suddenly from the placenta caused a backward coupe and increased arterial tension, together with an increased amount of work thrown upon the right side of the heart. Intra-uterine respiration taking place, the lung expanded, amniotic fluid, meconium, epithelium, and mucus entered the nose and throat, and, if the efforts at inspiration had been active, even reached the trachea and bronchi. As the respiratory attempt went on, but no oxygen reached the medulla. it gradually lost its irritability, respiration ceased, and the heart and vessels were left engorged with blood. Ecchymoses, if not hemorrhages, were seen in different parts of the autopsy. The time during which the asphyxia had existed, or its degree, differed in different cases. In the milder ones the muscular tone was preserved, the head did not drop, the skin was dusky red or cyanotic, the conjunctivæ were congested, the umbilical vessels distended, reflex movements could be excited by irritation. In these cases respiration often returned. But in the more advanced state of asphyxia the surface was pale, cold, the heart-beat was feeble and infrequent, the umbilical vessels were nearly empty, the head dropped. there was loss of muscular tone ; if there was any attempt at respiration there were no associated movements of the muscles of the face.

The first signs of returning animation were the refilling of the capillaries and of muscular tonicity.

The indications for treatment were to clear out the air-passages, restore the irritability of the medulla, increase the force of the heart-contractions, relieve the plethora of the heart and blood-channels, expand the thorax. Where muscular tonicity was still present these conditions were easily fulfilled ; and clearing out the fauces and nose of mucus, the use of flagellations and the stimulus of warm and cold water were likely to prove sufficient. But in a number of instances the skin in a few days became dusky, the heart-action feeble, and the child died of atelectasis. To avoid this no method excelled Schultze's.

Schultze's method was illustrated on the child cadaver. The thumbs were placed upon the anterior portion of the child's head, the index-finger in the armpits, the hands diagonally over the back, the body hanging down. The mouth being open, the pulling upward on the thoracic muscles drew the upper ribs upward, while the attachment of the abdominal muscles caused the lower ribs to be drawn downward, the diaphragm fell downward, and thus the cavity of the chest was expanded to the greatest possible degree. Inspiration was thus induced. Now, by extending the hands horizontally and giving the body of the child a forward turn, the position was assumed in which the abdominal viscera pushed up the diaphragm, the ribs were brought in close contact with each other, and the most efficient form of expiration was carried out. Perhaps there was no other way in which the mucosities taken up into the lungs could be so efficiently expelled. Before laying the child aside it was desirable to swing it gently a few times forward and upward over the hands so as to completely ventilate the lungs and expel the mucus from the air-passages. But the greatest advantage of the Schultze method related to the manner in which the congested heart-cavities, thorax and blood-vessels were unloaded of engorged blood. There was no doubt but what the Schultze method would save many of that class of cases which heretofore had been resuscitated only to die the third or fourth day.

But the method was capable of abuse. Before it was employed, the child should be placed in warm cloths, and its nose and fauces cleared of mucus. Then proceed to clear the trachea and bronchi by passing a No. 8 English catheter and using suction. This often required time and repeated introduction of the elastic tube. Meanwhile, insufflations should be employed at intervals. Gentle compression of the chest-wall should now and then be practiced. By these means, little by little, the blood received oxygen, and returning irritability of the medulla was manifested by occasional movements. Then Sylvester's method was practiced. It was not of much use, however, unless one had an assistant to hold the extremities. The tongue should be drawn forward and its base depressed, to permit entrance of air. As soon as the heart-movements became plainly perceptible the child should be placed in warm water, lifted again, and sprinkled with cold water. But to dip it suddenly in cold water had often caused instantaneous death. Putting it into warm water and sprinkling the face with cold water was harmless. Finally, the swinging method of Schultze should be employed, especially for its effects upon the circulation. It should be remembered that cases of asphyxia required watchfulness and

a hopeful spirit. Even after having presumably resuscitated the child by the procedure just outlined, it might again be necessary to go back to the catheter and insufflation.

Homœopathy by a Homœopath.

Dr. W. M. Decker, of Kingston, N. Y., in the *New York Medical Times*, February, 1891, has a paper in which he quotes criticisms of a Dr. Tooker on some resolutions, which Dr. Decker submitted to the Homœopathic Medical Society of the State of New York, at its semi-annual meeting held at Brooklyn last year.

The first resolution proposed by Dr. Decker reads as follows: "*Resolved*, That, in the opinion of this society, the theory of the psoric origin of chronic diseases, as set forth by Hahnemann in the *Organon* and in his other writings, is erroneous; and, therefore, as a basis for treatment, it is misleading."

The second resolution is "*Resolved*, That all symptoms attributed to provings with high potencies are of doubtful reliability; and, therefore, they are not trustworthy guides in practice."

Of this resolution Dr. Tooker says: "The second resolution is only worthy of consideration because Hahnemann in his dotage and some of his disciples in their early enthusiasm believed it and taught it. As the great majority of the followers of Hahnemann, however, at the present day, have seen its fallacy and have already discarded it, there seems to be no special harm in giving it official and respectful burial in the resolution as formulated."

Dr. Decker says he cannot understand how he can accept the one and reject the other. If he is not a believer in high potencies, then, he cannot accept the doctrine of potentiation or dynamization; and that is all the third resolution condemns.

The third resolution is "*Resolved*, That, in the opinion of this society, the theory of potentiation of drugs, as taught by Hahnemann in the *Organon* and in his other writings, that is, the doctrine that the more drugs are attenuated by successive triturations, or the more they are diluted and succussed, the more their power and effectiveness is increased, is hereby declared unsound and unreasonable in principle, except the fact that division of drug matter is accomplished."

This is the resolution which Dr. Tooker cannot accept; and yet he does indirectly accept it, as before stated. The above resolution does not reject attenuation or dilution of drugs. The divisibility of matter is embodied in the resolution as an exception. The resolution does not declare that unsound and unreasonable; but only the doctrine of potentiation. Dr. Tooker seems to lose sight of the distinction between the meaning of the terms attenuation and dilution as compared with potentiation and dynamization when applied to drugs. They are not synonymous terms, and cannot be used interchangeably.

After explaining his notions, Dr. Decker says: "To prove that potentiation of drugs as taught by Hahnemann is false, absurd and unreasonable, I need only refer you to Hahnemann's own statements, viewed in the light of our present knowledge. I refer you to *Hahnemann's Lesser Writings*, by Dr. Dudgeon, p. 733, from which we quote the following: 'In the same way liquid medicines do not become, by their greater and greater attenuation, weaker in power, but always more potent and penetrating. For homœopathic purposes this dilution is performed by well shaking a drop of the medicine with a hundred drops of a non-medicinal fluid; from the bottle so shaken a drop is taken and shaken up in the same manner with another hundred drops of unmedicated fluid, and so on. This result, so incomprehensible to the man of figures, goes so far that we must set bounds to the succussion process, in order that the degree of attenuation be not over-balanced by the increased potency of the medicine, and in that way the highest attenuation become too active. If we wish, for example, to attenuate a drop of the juice of *sundew*[1] to the decillionth, but shake each of the bottles with twenty or more succussions from a powerful arm, in the hand of which the bottle is held, in that case this medicine, which I have discovered to be the specific remedy for the frightful epidemic *whooping-cough* of children, will have become so powerful in the fifteenth attenuation (spiritualization) that a drop of it given in a teaspoonful of water would endanger the life of such a child; whereas, if each dilution bottle were shaken but twice (with two strokes of the arm) and prepared in this manner up to the decillionth attenuation, a sugar globule the size of a poppy

[1] *Drosera rotundifolia.*

seed moistened with the last attenuation cures this terrible disease with this single dose without endangering the health of the child in the slightest degree.' "

According to Hahnemann the process of succussion and trituration develops in drugs, or imparts to drugs, more and more power the further the process is carried on ; or the more dilute and attenuated they become by this process the more actual power and force is engendered ; and this force, or power, started in the material, becomes greater as the material becomes less and less ; and finally, when the material has passed away, the accumulated power is transmitted or passed over to the spiritual ; and that goes on increasing in power *ad infinitum*, if the process is continued.

According to the process, Hahnemann believed that, when the spirit world was reached with drosera ("the fifteenth attenuation [spiritualization "]), provided each potency had received twenty succussions instead of two from a powerful arm, then it would endanger the life of a child with whooping-cough.

He directed that each successive dilution should be succussed twice, if more than that, the power would be developed too rapidly, for each and every additional shake meant more power. Hence, in the case of drosera, when the point is reached where there is no drug material left—where the body of the drug is all gone, then the spirit of the drug, like the soul of John Brown, goes marching on mighty in its power and deadly in its effects. Now, if this be so, it should be regarded, by the law of the State, malpractice to dispense the so-called high potencies without a label signifying that they are deadly ; and it should be generally understood and taught that a high dilution should be brought low by dilution ; but mind you don't shake it. *The only safety in diluting a high potency is in not succussing it.*

Such is the logic of Hahnemann. To-day it is nonsense ! folly ! delusion ! craziness ! and there is no danger of killing a child with drosera in any dilution. Hahnemann takes us out of the tangible into the spirit world—of which we know nothing ; and the nearer we approach to nothingness, if on the given scale, by jerks, the nearer, he tells us, we approach to something—call it disembodied power, which is a misnomer, a fallacy.

The more material the more power. We cannot comprehend or utilize a force independent and separate from material. In all science, in all mechanics, there is no such thing as power without material. This is a self-evident truth, which confutes and confounds and makes a lie of Hahnemann's doctrine of potentiation.

A drug's usefulness, or beneficial influence, may be increased by dilution, but not its power. The less material the less power, on general principles, whether it is succussed or not. Does a tornado become more powerful by dilution ? Does a man's arm become stronger by emaciation ?

Is the thirtieth attenuation of prussic acid more powerful and deadly, when succussed according to Hahnemann's directions, than the pure acid itself ?

Power or potency is one thing ; but the fitness, the adaptability of things is something else. A drug, by dilution or trituration, may be better adapted to the cure of disease, it may, by that process, be the better fitted for efficient use by the system ; but its power has not thereby been increased ; and it does not continue to increase as the material is lessened *ad infinitum*.

There is no such thing as a high potency, because power does not increase with successive diminution of matter, notwithstanding it may have been triturated or succussed. You cannot get out of a drug anything more than is in it ; and succussion and attenuation possess nothing and give nothing. There is no such thing as a high dilution, for the so-called high dilutions contain none of the original drug material. In order to dilute, there must be something for dilution—some material ; and, if there is no material, there can be no dilution.

Force or power cannot be conveyed or exhibited beyond matter nor without matter ; and to claim that it can, or to advance such doctrine, is nonsense ; for it is unscientific, untenable, undemonstrable and false. I close with a little prayer—"With all thy getting, get understanding." Amen !

[All this is very interesting, and suggests the query : What is a homœopath ?—Editor of Reporter.]

Removal of the Uterine Appendages in Cases of Functional Neurosis.

At the meeting of the Obstetrical Society of London, January 7, 1891, Dr. Playfair read a paper on removal of the appendages of the uterus for neuroses, an abstract of

which appears in the *British Medical Journal*, January 17, 1891. He detailed several cases that had come under his observation: —1. A case of neurosis treated by removal of the appendages, without benefit, subsequently cured by systematic treatment. 2. A similiar case in which the operation was recommended, and about to be performed, when the patient refused her consent, likewise cured by systematic treatment. 3. A case of neurosis, in which there was distinct evidence of structural disease of the appendages. In this instance the neurotic symptoms were first dealt with, in the hope that the patient would be sufficiently bettered to avoid the necessity of operation.

The subject of hystero-epilepsy and mania treated by removal of the uterine appendages was considered, and an illustrative case given. The general conclusions arrived at were:—1. That the removal of the appendages is not a legitimate procedure in cases of purely functional neurosis. 2. That when marked structural disease of the appendages co-exist with severe neurotic conditions, the latter should be treated in the first instance, in the hope that operation might be avoided. 3. That in hystero-epilepsy and hystero-mania the results of operation have been so unsatisfactory that it is a procedure of very doubtful expediency, and not to be recommended.

Sir Spencer Wells referred to a pamphlet by Dr. Ross, of Toronto, on "The failure of the removal of the tubes and ovaries to relieve symptoms." Dr. Ross says: "To operate on organs not diseased for the relief of indefinable pain symptoms, hysterical symptoms, cataleptic symptoms, epileptic symptoms, is in my mind unjustifiable. A craze seems to have taken hold of the profession. The axiom seems to have become, if a woman has indefinite pains and local symptoms, take out her ovaries. This axiom requires a radical change." Dr. Ross went on to say: "I have seen these unjustifiable operations done both in Europe and America. . . . Many cases in which ovaries and tubes are removed to relieve certain nervous symptoms remain unrelieved. . . . Many cases I hear of as cures are not cures. . . . From our many failures to remove nervous diseases, as hysteria and epilepsy, by castration, we can see that the ovaries play but a part in their causation; and I believe that we might as well hope for relief of these diseases by enucleation of both eyes as by removal of both ovaries, or both tubes, or both tubes and ovaries, or even tubes, ovaries, and uterus." Dr. Ross related a case in which he removed the ovaries in 1886. In 1888 he was able to report that his patient had been in splendid health ever since operation, but in 1890 had to say: "her mental condition is not what it was before. She seems lazy, indolent and fat, and is not the bright little woman she was before the operation, even when she had her aches and pains. Sexual intercourse is only indulged in as a marital duty; it gives neither pain nor pleasure." Then Dr. Ross proceeded: "Many deaths from these operations have been recorded. . . . A girl's prospect of marriage, maternity, and a happy life are blasted forever by such a procedure." Dr. Ross then referred to a case in which a woman of his acquaintance was operated on in the provinces, and her case was brought before the Gynecological Society in December, 1888, very soon after the operation as a practical cure. Sir Spencer Wells had seen that lady that day; she had never been well since the operation, but very much worse than before, and her case instead of being a cure was a deplorable and disastrous failure. He had seen other cases almost as unsatisfactory, and he fully concurred in all that Dr. Playfair and Dr. Ross had said against unnecessary and unjustifiable mutilation for transitory disease.

Operation for Cerebral Hernia.

The *Western Medical Reporter*, January, 1891, contains an interesting report of a successful operation for cerebral hernia by Dr. J. Frank, of Chicago.

On August 11, 1890, the mother brought a little three-year-old girl to the Cook County Hospital, saying the child was kicked by a horse which was being shod. On examination paresis of the left arm and leg was found. The right pupil was somewhat larger than the left and both reacted to light. Stupor was well marked. After shaving the head, the scalp was found to be intact, with the exception of its being discolored. On account of swelling, a depression of the skull could not be determined. The stupor and paresis justified an exploratory operation. After the operation, there was an immediate improvement of the paresis and stupor. Several days after the operation the child was able to sit up in bed and play.

Where the dura was destroyed and over the region where the drainage was placed, a hernia developed, which kept on growing larger. As the hernia kept on increasing in size, an operation was decided on. The method adopted in this case is as follows: The scalp was dissected from the tumor where it was reflected and firmly united. The dissection was carried on until healthy brain tissue was reached, when, with the handle of the scalpel, the hernia was cut away, during which time cerebral fluid oozed out. As soon as the hernia was removed the brain filled out the empty space. A smart hemorrhage now succeeded, which had to be controlled by packing. It was seen that the dura could not be brought together, so the edges of the scalp were freshened and united with interrupted sutures. A compress was put over the wound to keep the parts as quiet as possible and for the purpose of securing primary union, as upon this rested the success of the operation. The evening of the following day the child had a slight general convulsion, commencing in left arm and leg, followed by stupor which lasted about six hours, which apparently was produced by the compress being strapped on too tightly over the area where the brain pulsated against the scalp.

Four days after the operation the child was running about the yard. In a week the stitches were removed. Everything looked favorable until about the second week after the operation, when a small point in the middle of the line of the incision commenced to slough. Fortunately, the sloughing did not extend very far, leaving the parts in a fair condition.

Practice by Syphilized Practitioners.

The *Medical Press* January 21, 1890, says: A foreign contemporary discusses the question of the duty of a medical man who has been unfortunate enough to contract syphilis in the matter of continuing to practice his profession. Everything must, of course, depend upon the nature of the manifestations, their site and their age. It is obvious that no conscientious man with a specific ulceration on the hand would undertake any obstetrical or surgical operation involving the risk of infection to the patient. There is no reason to suppose that infection is possible in the absence of cutaneous lesions, though any serous of sanguineous exudation might conceivably convey the contagion. This, however, is still a moot question, and the circumstances under which a medical man would be constrained to cease to practice are rare and improbable.

Therapeutic Use of Monesia Bark.

The so-called "monesia bark" (*Cortex monesiæ*, or *cortex Buranham* or *Guaranham*) is derived chiefly from a Brazilian tree *Chrysophyllum glycyphlœum Casaretti*, but also from other six varieties of the species *Chrysophyllum*, belonging to the natural family *Sapotaceæ*. According to Henry and Payen, the bark contains saponin, an allied body "monesin," tannic acid, glycyrrhizin, wax, a crystalline fatty substance, etc. Years ago the drug (in the shape of a solid aqueous extract, termed simply "monesia") was much vaunted and used, especially in France, as a tonic and an astringent. Subsequently, however, it gradually fell into oblivion. Quite recently, Dr. Pavel G. Rozanoff, of Moscow, has once more drawn the attention of the profession to the long-forgotten remedy (*Moscow Inaugural Dissertation*, 1890), emphatically pointing out that monesia actually affords an excellent expectorant and astringent agent. He describes a number of cases of respiratory and intestinal affections (acute and chronic bronchitis, pneumonia, subacute enteritis, chronic diarrhœas, etc.), in which he most successfully resorted to the internal administration of a mixture, made of from ½ to 1 drachm of aqueous extract of the bark to 6 ounces of water. The mixture was always given in tablespoonful doses, repeated every two hours. The author's experience seems to justify the following general propositions. 1. The bark affords a good expectorant, which is dependent upon its containing saponin and monesia. 2. At the same time, owing to a rich proportion of tannin, the remedy constitutes a good astringent. 3. It is quite free from any unpleasant accessory effects and hence, as an expectorant, should be preferred to ipecacuanha, senega and such like drugs. It is especially indicated in cases of respiratory disease in which a more or less prolonged administration of an expectorant is deemed necessary, as well as in cases where the ordinary expectorants are apt to give rise to gastro-intestinal disturbances. 4. As an astringent monesia

proves to be useful in chronic diarrhœas. 5. In virtue of its simultaneously possessing expectorant and astringent properties, the bark will be found eminently beneficial and convenient in cases of co-existing chronic catarrhal affections of the respiratory and intestinal tracts.

Medical Practice in Missouri.

The *St. Louis Courier of Medicine*, January, 1891, says:

"Unless steps are taken in the near future to raise the standard of requirements for the practice of medicine and surgery in this State, we will find to our sorrow and dismay, that when the higher standard adopted by all our sister States goes into effect, Missouri will be overrun with 'quacks.' We have an abundant supply of them now, without any emigration of the 'scum and rot' of other States. The very day they are affected by this change in the present laws, there will be an exodus, the like of which was never seen. The wagon-roads from every point of the compass will be crowded with the vehicles of the traveling quack with their banners flying, hurrying to the Mecca; the paradise, which the narrow-minded policy of our State government has maintained for years." To this, it adds: "Let us arise in our might ere our strength and present power has passed away, and place Missouri on an equality with all the States around us!"

Caustic Treatment of Carbuncle and Diphtheria.

Dr. Gëorgy Ï. Gisler, of Semipalatinsk, describes (*Proceedings of the Omsk [Siberian] Medical Society*, No. 8, 1890, p. 187) six successive cases of severe carbuncle of the neck, rapidly cured by the application of the following mixture, prepared *extempore*.

℞ Potassæ s. sodæ causticæ fusæ
Magnesiæ ustæ ää . . . . . gr. ii
Aquæ destillatæ . . . . q. s. ut ft. linimentum

Sig. Carefully paint over the diseased area, by means of a brush, until an equal layer, one-fourth inch thick, has formed. Then cover the part with a piece of linen, soaked in a 50 per cent. solution of carbolic acid, or in wintergreen oil.

Simultaneously, antefebrin (5 grains at bed-time) and quinine (from 10 to 15 grains similarly at bed-time) were given internally. In every one of the cases, in 3 or 4 hours after the application a profuse perspiration appeared and the temperature returned to the standard. On the next day the ulcer was found to be replaced by a black, dry and firm scurf, which gradually became detached from the subjacent tissues, leaving a soundly granulating and rapidly healing surface.

Dr. Gisler states, further, that in such cases of gangrenous faucial diphtheria as are not accompanied by an intense enlargement of the submaxillary lymphatic glands, he invariably obtains most satisfactory results from cauterizing the diseased region with chloride of zinc. He commences the treatment with carefully touching the area with the solid chloride; two hours later he paints the region with a 50 per cent. solution of the salt, and subsequently passes to an 8 per cent. one, repeating the application every two hours. After each *séance* the patient is given internally a solution of bicarbonate of soda ("to decompose the zinc salt, if swallowed"). If the nasal passages are simultaneously involved, he irrigates them with a solution of perchloride of iron in a saturated chlorine water and lets the patient gargle his throat with the same fluid. Of internal remedies he administers calomel "in drastic doses," in the beginning of the treatment, and subsequently gives salicylic acid every two hours (in 5-grain doses to a child under 2 years of age, and from 15 to 20 grains to older patients). The patient should be constantly kept in the room at 8° or 10° Reaumur (50°–54.5° Fahr.) [This would be thought a low temperature in this country, for a sick room.—Ed. Reporter.]

Fish Poison.

The *Vierterjahrsschrift für Gerichtliche Medicin*, January, 1891, calls attention to a very important matter in connection with the use of fish as a food. It appears that an investigation of the result of eating fish preserved on ice for use in the London markets, has led to the discovery that those were most dangerous which were kept in immediate contact with the ice. Poisoning by fish which had not been in contact with ice was not observed at all. This is attributed to the influence of the water derived from the ice, and bearing whatever impurities it had had before being frozen, which promotes the formation of the animal alkaloids known as fish poison.

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GYNECOLOGICAL SUGGESTIONS.

With characteristic felicity of expression, Professor Goodell has chosen for the title of a recently published paper the expression "What I have Learned to Unlearn in Gynecology."

In this paper, while he confines himself to the discussion of misconceptions which pertain exclusively to maladies peculiar to women, he adopts a course, which, if followed out by others entitled to speak authoritatively, would prove of incalculable value to the profession.

The history of recent medicine records the uprooting of time-honored dogmas to an extent heretofore unexampled; and the experience of Dr. Goodell, which he so frankly relates, must have been that of all progressive men. If they would record, in short, concise papers, what they have found to be wholly unreliable, it would deter many from undertaking what is not only of no value, but what unfortunately is too often positively injurious, and, in addition, it would act as an incentive to more careful investigation into the causes which underlie disease, and the adoption of better means for its relief.

The paper which suggests this article deserves thoughtful consideration for the sound views gathered from a wide and varied experience. The first subject considered is the disposition, prevalent both in the profession and among the laity, to regard the menapause as responsible for a large percentage of the maladies of matronhood, and, having accepted that view, to allow without investigation conditions which can be relieved only by early interference, to advance so far that, when recognized, the sufferer is beyond relief, either by reason of the fatal nature of the disease itself or the ravages which it has produced in the vital energies. Dr. Goodell very strongly insists that the climacteric should not be considered a cause for uterine disease, and suggests that unusual hemorrhages or other discharges occurring at this period in a woman's life should always be regarded as symptomatic of the existence of organic disease, calling for careful investigation and prompt treatment. He points out that cancer of the cervix, polypi or fungus vegetations of the endometrium are almost invariably responsible for these conditions, while the part played by the menapause in the disorders attendant on the climacteric is almost exclusively detected in the many nervous phenomena present at that time, or as a factor in the production of insanity.

The belief that the menstrual period is unsuited to surgical procedure he clearly shows to be a fallacy, pointing out that, where the curette is to be used for the removal of uterine vegetations, this time is the best, because they are then swollen by the afflux of blood and can be more readily removed. He says, "there is no surer way of checking a menorrhagia or of stopping a

metrorrhagia than by curetting the womb during the very flow." Indeed, where time is precious, the gravest operations not only may be, but, with few exceptions, should be performed. Further he says, "while I do not select this period for the removal of ovarian cysts or for other abdominal work, such as the extirpation of the ovaries, of a kidney, of breaking up intestinal adhesions, etc., yet I have not hesitated to perform these operations at such a time, and have never had reason to regret the course. The only operations that I should dislike to perform during menstruation would be those involving the womb itself—such as the removal of a uterine fibroid or a partial or a complete hysterectomy, and the various operations for uterine cancer, etc. . . . . For obvious mechanical reasons it would also hardly be wise to sew up the torn cervix of a menstruating womb."

Dr. Goodell's suggestions in regard to the management of lying-in women, a subject of the greatest importance and one which confronts so many of us, is so practical that we cannot refrain from reproducing it in full. "In the lying-in chamber," he says, "the fear of septicæmia will ever haunt me, but I have long since abandoned the idea cherished by that class of waistless and witless nurses, now happily obsolescent, that the parturient woman is to be swathed like a mummy and kept as immovable. What earthly harm can accrue to a woman after a natural labor if she turns over from side to side, sits up in bed, or even gets up to use the commode, if she feels like it, I cannot see. Natural labor is a physiological process, not a pathological one, but tradition has thrown around the lying-in bed a glamour of mischievous sentiment.

"In relation to this, let me express my disbelief that mammary abscess comes from 'caked' breasts, or from breasts over-distended from a secretion too great for the infant's needs. Mammary abscess in the suckling woman comes, in my opinion, from cracked nipples, and from cracked nipples alone. In proof of this let me ask my readers if any one of them has ever had a case of mastitis after a miscarriage, or one of gathered breast following a still-birth—always provided the breasts were let pretty much alone so far as pumping and sucking are concerned. Under these circumstances the unsucked and unpumped breast will swell up and grow painfully hard, but will not inflame or suppurate. Let me not be understood as saying that an over-distended breast should not be relieved by sucking or pumping; but the means employed for this relief must be so sparingly used, and at such long intervals, as not to crack the nipples. This immunity from mammary abscess after miscarriages and still-births is attributed by the physician to his local applications of belladonna, or other milk-drying drugs. But it comes from the absence of the exciting cause of cracked nipples—a sucking child."

We call attention to these suggestions of Dr. Goodell because they are eminently worthy of careful consideration by all who have women for their patients, and because they illustrate a spirit in the art of medicine which it is pleasant to applaud and to commend for imitation.

NATURE OF LUPUS.

Within the past few months, since the announcement by Dr. Koch of the discovery of a remedy for tuberculosis, English-speaking people have been made familiar with the name lupus. In reply to their inquiries as to what lupus is, it is not too much to say that the almost invariable answer has been, it is tuberculosis of the skin. The teaching of German and American dermatologists is practically unanimous on this point, and the treatment of lupus with Koch's remedy assumes it as a starting point. It is with much interest, therefore, that we have read the first of Mr. Jonathan Hutchinson's Post-Graduate Lectures on the "Nature of Lupus," in the *Lancet*, Jan. 17, 1891.

This author says that the sum of the evidence seems to him much in favor of the belief that lupus is a specialized form of chronic inflammation rather than the result of infection. He does not altogether, in his theory, exclude the influence of the parasite, but appears to think that conditions of local irritation favor the implantation of the bacillus, as ploughing and manuring of a field prepare it for the sowing of seed. He declares, what every one knows to be true, that it is extremely difficult in many cases to diagnosticate lupus from scrofulous ulcers and ulcerating chilblains. But whenever a chronic inflammation of skin or mucous membrane, not due to syphilis, shows a persisting tendency to spread at its edges, to produce satellites near it, and to leave a condition of scar behind it, such a process Mr. Hutchinson regards as lupus. Another condition, which he believes to be diagnostic of lupus, is the presence beneath a thinned layer of epidermis of a deposit or growth of a semi-translucent ("apple-jelly") granulation material, often in considerable thickness.

As to the classification of lupus, Mr. Hutchinson questions whether clinical evidence can be held to prove the alliance of lupus with tuberculosis, rather than with cancer. As an argument against the bacillary nature of the disease, he remarks: "I doubt much if many observers could collect from their own observations as many as four cases of lupus in which the patients has subsequently succumbed to any form of internal tuberculosis." The *Lancet*, however, reminds him editorially that Besnier has observed phthisis in association with lupus eight times in thirty-eight cases of lupus, that is, in over twenty per cent. of the cases.

Lupus is so rare in this country that we must look to the pathologists of Europe to settle the question of its nature. Taking the skin dispensaries in connection with the hospitals of Philadelphia, we doubt if they average one case of lupus vulgaris a year.

Mr. Hutchinson's communication is remarkable as showing that a man of great experience and close observation is far from believing that lupus is tuberculosis, in spite of the fact that scarcely any other voice is heard against that view. If Koch's remedy were to prove of unfailing accuracy in the detection of lupus, it would be a valuable agent; but it has not attained this position yet, so that we must look to older means of diagnosis for help.

In order to estimate fairly Mr. Hutchinson's paper, it should be borne in mind that he does not accept all the pathological views which now prevail; and, on the other hand, that tubercle bacilli, which are generally accepted as an evidence of the existence of tubercular tissue, do not seem to be found in the very early stages of lupus.

HOMŒOPATHS AND THE MEDICAL EXAMINERS' BILL.

In order that the readers of the MEDICAL AND SURGICAL REPORTER may understand into what a fever of excitement the homœopaths in Pennsylvania have been thrown by the proposition to have their graduates examined by some body besides their own College Faculty, we reproduce in another part of this number of the REPORTER an editorial from the *Hahnemannian Monthly*.

We take it for granted the readers of the REPORTER and the community will appreciate the signifiance of the fear which seems to fill the homœopathic (college?) breast when there is any chance that the State may take into its own hands the determination of fitness for practicing medicine, as contrasted with the composure with which the Regular School consents to undergo—without making any conditions—any test of merit which the wisdom and honesty of our law-givers may appoint.

This singular contrast receives a curious side-light in view of a letter published in the REPORTER August 24, 1889, to which so far we have seen no answer. This letter is re-

printed in the present issue, so that it may be considered in connection with the opposition to a Medical Examiners' bill which would make it impossible for a graduate of the Eastern Penitentiary to get a medical education, a diploma, and endorsement by the Hahnemann Medical College, and the legal right to practice medicine, in the short space of eight months!

Book Reviews.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the Reporter.]

ILLUSTRATED ENCYCLOPÆDIC DICTIONARY. By Frank P. Foster, M. D. Volume II. 4to, Cac.—Fasay, pp. 753-1544. New York: D. Appleton & Co., 1890.

This is the second volume of the Dictionary of Medicine edited by Dr. Frank P. Foster, of which we noticed the first volume October 6, 1888. The second volume is fully up to the standard of the first in completeness and reliability. For a medical dictionary there is some inequality of space to different subjects. For example, the word "corolla" occupies more than one page of space, and is illustrated with great completeness, while the word "douche" occupies as much space, and is illustrated with a variety of cuts which look as if they had been borrowed from the instrument makers. The principal advantage of the book, so far as we can judge, is the fact that it contains a very large number of words, and is that much superior to most medical dictionaries. It must have demanded an enormous expenditure of labor for Dr. Foster to carry on the work of getting out a volume like this in addition to his work as Editor of the *New York Medical Journal*, and we congratulate him upon the high degree of excellence to which he has brought it.

CHARLES LETTS & CO.'S A B C MEDICAL DIARY AND VISITING LIST. London: Burroughs, Welcome & Co., 1891.

We have received a copy of this English book, which corresponds with our American Visiting Lists. Nearly one-half of its thickness is made up of reading matter of interest and value, while the tabular parts are very well ruled and conveniently arranged. The whole is well made, as a book, and neatly bound, though we miss the cover flap which is put upon all similar books in this country.

Literary Notes.

—The *Dietetic Gazette*, with the number for January, 1891, passed into the editorial management of Dr. Simon Baruch, of New York. Nothwithstanding the principles announced in his salutatory, the Department of "Annotations" (presumably editorial) contains no less than thirteen reading notices.

Notes and Comments.

Endorsing Diplomas in Pennsylvania.

In the Medical and Surgical Reporter, August 24, 1889, was published a letter from one of our subscribers who said: In your issue of August 3, there appears a communication from "Jno. E. James, M. D., Registrar of Hahnemann Med. College of Philadelphia," in which he takes you to task for not basing an Editorial in the Reporter, July 13, 1889, upon facts nearer home than England. Now I wish to relate some facts, and would like to have made manifest the consistency between them and the declarations in the article referred to above.

On the 22d day of April, 1884, Hiram T. Kinsman registered in the Prothonotary's office in Bradford Co., Pa., as a practitioner of medicine, claiming that he had been in continuous practice in this county since 1871—"Degrees, 'None'"—enumerating five different places in the county where he had been in practice during that time. Subsequent events, however, showed that there was one place more of alleged practice (not in the county) that he did not have recorded on the Register.

The said Kinsman was charged with illegal registration. During the trial it was in evidence, and admitted by defendant, that for four years of the time of his alleged practice in Bradford Co. he was an inmate of the Eastern Penitentiary. His crime was criminal abortion. It is said that the woman died of hemorrhage, which he did not know how to control. Kinsman claimed that he practiced while in prison, by sending prescriptions to persons in this county. Suffice it to say that the jury disagreed; but before the second trial, Kinsman agreed to have his name stricken off the Register, and this was done by order of the court on September 6, 1886. Kinsman was absent a few months from home (at least it was so reported), and on May 9, 1887, registered again—this time as a graduate of "Bennett *Eclectic* Medical College," "endorsed by *Hahnemann Medical College of Philadelphia*, and Eclectic Medical College of City of New York."

Here is an ignorant migrating "doctor," convicted of a penal offense, and of false registration, who, after not more than a few months of medical study, is registered as endorsed by the college that "Jno. E. James,

M. D.," says sits on such a high and lofty elevation and requires a high standard of medical knowledge! I would say, with Jno. E. James, M. D., "Please note . . . . the whole of numbers 4 and 5." Yes, sir, we have noted them, and desire to ask what kind of *professional and moral standing* the person in question has, and what was the character and quality of his *examination* by the faculty of the Hahnemann Med. College?

Reading these rules in the light of these facts they appear very much like first-of-January resolutions. I think these rules need bracing up in the year 1889, without waiting until 1890 and 1891, judging by the case cited.

The Homœopaths and the Medical Examiners' Bill.

Under the amusing title, "The Proposed Allopathic Bill to Establish in Pennsylvania a State Board of Medical Examiners," the *Hahnemannian Monthly*, in its February issue, publishes the following editorial.

This act provides for the appointment, by the governor, of a board of examiners consisting of nine members, three of whom shall serve for one year, three for two years, and three for three years, in the first instance, and thereafter annually the governor shall appoint three members to serve for three years. The members of the board shall be graduates of a legally chartered college or university having power to confer degrees in medicine. They must also be citizens of the United States and of Pennsylvania, and shall have been in active practice for a period not less than ten years. Not more than one shall be appointed from the same county, and none shall be a member of the faculty or staff of any medical school or university. The applicants shall be examined in anatomy, physiology, chemistry, toxicology, pathology, hygiene, materia medica and therapeutics, principles of medicine, surgery and obstetrics. Any candidate for examination may choose the system of materia medica and therapeutics in which he or she shall be examined, and no one shall be rejected on account of adherence to any school of practice. The board shall hold two meetings in each year —one at Philadelphia and one at Pittsburgh. The Pittsburgh *Medical Review*, in commenting upon this bill, the birth of the committee of the presidents of the various allopathic county medical societies, says: "The proposed bill is, of necessity, not such an one as the regular members of the medical profession would desire, and what strict adherence to all that is best, from a *humanitarian* standpoint, would demand, for, in that case, it would confine the appointing power of the governor to the ranks of the *regular scientific practitioners*," . . . etc. "It would seem only just, however, that the representation on the examining board should be governed by the percentage that the members of the sectarian schools bear to each other." The members of the homœopathic school know very well that this bill is "not such an one" as the trades-union spirit of the self-styled "*regular scientific practitioners*" demand. Of course, its apparently liberal provisions are framed through dire necessity. Of course, the membership of the board would have been composed *exclusively* from their own selfish sect, if they had entertained a grain of hope that it could have been forced through the legislature in that shape. Of this no one entertains the slightest doubt. Liberal as these provisions may appear through allopathic spectacles, they will not do. Homœopaths have not forgotten how the members of the allopathic committee betrayed the trust reposed in them in 1889; consequently, the members of the homœopathic profession have no confidence in the honesty of purpose of the allopaths. We object to this bill, principally because it does not definitely fix the composition of the board. We must have an equal representation. The editors of the *Review* are in error when they think "that it is only just that the representation on the examining board should be governed by the percentage of members of the different schools of medicine." This question is not one of relative members of the various schools; the proposed bill will not affect any physician now in practice. It is designed to examine into the fitness to practice of future applicants. Each school should have the right of absolute control over the members of its own faith. The schools of medicine stand before the State as units, and as such should have equal representation. The homœopathic school will have nothing less. The allopathic physicians who framed this bill are indulging in a bluff; they are hugging the fond hope that they will receive the majority of the appointments, and this risk we will not take. How can we take it, in the

face of their open boast, that once they can obtain an exclusive examining board they will stamp out of existence their hated rivals?

It is the height of folly to place the power of licensing of homœopathic physicians in the hands of a school that libels us by charging us with ignorance; and then openly proclaims that it will not aid us to knowledge. This is shown by the recent act of the New York Polyclinic in refusing to accept homœopathic physicians as students, and the University of Vermont in refusing to acknowledge a homœopathic diploma as evidence of attendance on medical lectures. We do not need the aid of either of the above-mentioned institutions; but we mention these facts in order to show the animus with which our enemies are actuated.

Lupus—or Tuberculosis of the Skin.

In a recent lecture, published in the *Medical Press*, January 28, 1891, Mr. Jonathan Hutchinson discusses the question: Whether or not lupus vulgaris is a form of tuberculosis, and how far clinical evidence supports the hypothesis that lupus vulgaris is of bacillary origin?

In reference to this he says: Lupus vulgaris is not a disease which attacks infants or young children. In exceptional cases it may occur even to the youngest, but commonly it waits until childhood is well advanced, or even until the period of puberty is passed. It is said by some never to begin in old age, but this is a mistake. We often see it begin at or after middle life, and in a few instances its subjects are advanced in years. When the latter is the case, it displays somewhat peculiar features, and may probably be ranked with that group of maladies to which Sir James Paget has given the name "senile scrofula." Although in many cases it is multiple in its manifestations in the skin, several, or perhaps very many, patches being produced, there is, with the fewest possible exceptions, no tendency to infect other parts. The lymphatic glands do not suffer, nor do the lungs, the bones, the joints, or the intestines ever become affected. Nothing is less common than to see a lupus patient pass into phthisis. Thus we may believe that the infective material, be it what it may, is one which finds a suitable home only in cutaneous or mucous structures. If it be a bacillus, it is a selective one, and it keeps to the tissue in which it had its first development.

The most typical forms of common lupus are often coincident with good health on the part of the patient, and the absence of any family history of tendency to tuberculosis. Of course, there are many exceptions to these statements, but all observers agree that they express the general truth. If, indeed, it were asked whether the clinical evidence more favored the belief of the alliance of lupus with tuberculosis or with cancer, I am inclined to think that the reply would have to express hesitation. Tuberculosis and the cancerous process have hitherto been held to observe towards each other something of a position of antagonism. Those who are liable to the one are not prone to the other, and the two are but very rarely found together. Almost all who have written on lupus have, however, been struck by the fact that parts affected by it not very infrequently take on cancerous growth. The evidence on this point has recently been collected by Bayha, of Tubingen, who from his own experience has collected no fewer than four cases. I doubt much if many observers could collect from their own observations as many as four cases of lupus in which the patients had subsequently succumbed to any form of internal tuberculosis.

In making these remarks I am far from wishing to ignore either the general impressions or the collected facts which favor the belief that there is some bond of connection between tubercular affections and lupus. What I contend for is that it is far less close than is generally believed. The impressions which most of us have, I expect, formed on this subject go far ahead of any proof of a statistical kind which we could supply. If I may be permitted to anticipate a little what I shall have to say in my next lecture, I may here mention the unexpected fact that statistical results are different in respect to lupus erythematosus. In this latter no observer has, I believe, succeeded in detecting the bacillus, yet it is far more frequently in close association with tuberculous conditions than is lupus vulgaris. Some light may perhaps be obtained for the elucidation of this difficult question by observation of the very earliest stages of lupus. We are so accustomed to see this chronic malady after it has been long existent, and when its peculiarities are well declared, that very little has been done in the attempt to describe, still

less to depict, its initial conditions. I much suspect that if we knew them we should have to acknowledge that they are often such as cannot be recognized as lupus at all. The disease may, and often does, originate in a condition of chronic or recurrent congestion and swelling not in the first instance to be distinguished from a chilblain. Or it may start from what looked like tuberous acne at the end of the nose, or from patches in the middle of the cheek, which had been often congested in the act of blushing or in the flush which attends indigestion. Slight injuries, insect stings, bruises, burns, etc., may become its starting point. In almost all cases something not distinguishable from a chronic papular inflammation is, I believe, the earliest local condition which is observed. The apple jelly may form before the disease is far advanced, but it is never present at the very first. Nor do we ever see anything in the least resembling a tuberculous ulcer. The early stage is in many cases insidious and prolonged, but it is not so in all. In some a tendency to rather rapid infective spreading is early manifested, and while it is so the conditions produced resemble rather those of common inflammation than anything which could be recognized as specifically lupus.

In concluding, Mr. Hutchinson says: I have here endeavored to bring in review the principal facts which, from the clinical standpoint, appear likely to help us to answer the question whether lupus vulgaris should be regarded as tuberculosis of the skin. We have seen that there is no evidence that it ever begins from the implantation of tuberculous matter, that it is only exceptionally associated with tubercle in the viscera, and that it never causes infective gland disease. We have also seen that there are other affections of the skin which do not resemble it, which are much more closely associated with tubercle and with scrofula. We have seen also that its remarkable preference for certain regions and parts seems to imply that the influence of cold is by far the most common of its exciting causes. I may own that the sum of the evidence seems to me much in favor of the belief that lupus is a specialized form of chronic inflammation rather than the result of infection. In suggesting this I am well aware that it is merely a negative conclusion which is liable to be overthrown at any time by the accumulation of positive evidence. It may be that in the future the presence of bacilli in lupus-products may be demonstrated in earlier stages, and much more constantly than has yet been the case. The results of Koch's injection treatment may possibly force us to believe that there is something about lupus which connects it far more closely with tuberculosis than I have admitted. I prefer for the present to say nothing about the results of the treatment already obtained.

Association of American Anatomists.

The third annual meeting was held Dec. 29 and 30, 1890, in the anatomical lecture-room of the Harvard Medical School, Boston, Mass. It was presided over by Dr. F. D. Weisse, Second Vice-President, and Dr. Thomas Dwight acted as Secretary *pro tem.* Papers were read as follows: *Corrosion Preparations*, by Dr. S. J. Mixter; *Studies on the Spine*, by Dr. Dwight; *A Comparison of the Fibrin Filaments of Blood-lymph in Mammalia and Amphibia*, by Prof. S. H. Gage; *The Semi-lunar Bone*, by Prof. Shepherd; *The Structure of Protoplasm and Mitosis*, by Dr. Carl Heitzmann; *The Homology of the Cerebro-spinal Arachnoid with the other Serous Membranes*, by Prof. F. W. Langdon; *The Occlusion of the Rhinocœle (Olfactory Ventricle) in the Dog*, by Mr. P. A. Fish and by Prof. B. G. Wilder; *The Relations of the Olfactory to the Cerebral Portion of the Brain; The Brains of a Cat and of a Sheep lacking the Callosum; Owen's Nomenclature of the Brain, with suggestions based thereon.*

With one exception the papers were illustrated by specimens, photographs or diagrams. and all were fully discussed.

The Committee on Anatomical Nomenclature (Professors Leidy, Harrison Allen, Frank Baker, Thomas Dwight, T. B. Stowell and B. G. Wilder) was authorized to publish, as its second report, "such general and specific recommendations as may be unanimously agreed upon by them."

The following were elected members: Dr. W. L. Dana, of Portland, Me.; Dr. John C. Munro, of Boston, Mass.; Mr. Pierre A. Fish, of Ithaca, N. Y.

The next meeting will be held at Washington, D. C., September, 1891, at or about the time of meeting of the Congress of American Physicians and Surgeons. The officers for that meeting are as follows: President, Joseph Leidy; Vice-Presidents, Frank Baker, F. D. Weisse; Secretary and

Treasurer, D. S. Lamb; Executive Committee, Harrison Allen, Thomas Dwight and B. G. Wilder.

Dangerous Lunatic.

The commission appointed to investigate the mental condition of James M. Dougherty, the escaped lunatic who returned and killed Dr. George F. Lloyd at the Flatbush Insane Asylum last autumn, and who was tried and convicted of murder in the second degree in Brooklyn, has just reported.

The commission finds that Dougherty is suffering from monomania, and the malady is marked by hallucinations in the different senses and by delusions or false beliefs; delusions of commingled persecution and expansiveness, the patient imagining he has enemies who conspire against him, or that he is a man of unusual talent, beauty or importance. These delusions are always of great seeming logicality, and as the memory and reasoning powers are not affected, while the usual manner and behavior are altered, the patient seems sane enough to those who suppose that every lunatic is violent, confused or incoherent.

The commission finds that Dougherty comprehends the nature and purport of his trial and was capable of defending himself. The prisoner presents a case of great medico-legal importance. Dougherty's delusions caused him to believe that he was the object of a conspiracy, and a man of such surpassing personal beauty as to have been regarded, at one time, the handsomest man in the world, and his hallucinations that he saw Mary Anderson in various places where the evidence showed she had not been, led him to the formation of a murderous plan, inaugurated by the murder of Dr. Lloyd, which he acknowledges was wrong in a legal sense, and which was to have been continued by killing many others. He firmly believed that his commitment into the asylum was a great wrong, for which there was no legal redress, and determined to call public attention to it by violent measures notwithstanding that he expected to be shot in the attempt or killed by electricity afterwards.

These hallucinations in nowise interfered with his understanding the motive and purport of his trial, or prevented him from defending himself. He thoroughly understood the legal meaning of his trial; knew his rights far better than the average citizen; knew the legal punishment for his deed; deliberated as to whether he would prefer death or imprisonment for life or commitment to a lunatic asylum, and in all respects comprehended the trial with as keen intelligence as though he had been perfectly sane.

The commission and commissioners have been unable to perceive that his delusions and hallucinations marred in the slightest degree an unusually intelligent understanding of the trial, although it is not within its province to offer an opinion on his comprehension of his act in killing Dr. Lloyd. He is as dangerous a lunatic as it has ever been the lot of the committee to encounter.

Dougherty will be sent to an insane asylum for insane criminals.

Medical Legislation in Arkansas.

The *Journal of the State Medical Society of Arkansas*, January, 1891, says, editorially, that it is taken for granted that when the present act to regulate the practice of medicine and surgery in this State was passed by a former Legislature, and became a law, it was intended and expected that it would effectually accomplish the purposes for which it was put upon the statute books. It is also believed that if, through certain palpable defects the law is ineffectual and fails in its purposes, the present General Assemby will be fair and just enough to remedy its defects by amendment of the present, or the enactment of a new law, *provided* it can be demonstrated to the satisfaction of the members of the Legislature that the present one is fatally imperfect.

It then quotes from an earlier editorial, saying: "The iniquities of the medical practice act in this State have been so often discussed, and are so well understood that it may be deemed almost superfluous to say anything further on the subject; but what is here written is suggested with the idea that it may be well at this time to formulate into more definite shape its defects, that they may be the more successfully urged in favor of amendment of the present, or the enactment of a new law. First. The qualifications and mode of selecting the members of the county boards of examiners are objectionable on the ground that in the first place the appointing power is vested in men who, as a rule, are wholly incompetent to pass on the qualifications that ought to be possessed by professional gentlemen designated as

'learned in the sciences of medicine and surgery, of good moral character,' etc. Second. No definite standard of qualification is prescribed, such as that members of the boards shall be graduates of reputable schools or members of some medical organization, admission to which carries with it the proof that the antecedents of its members and their professional and moral standing have been investigated. Third. While the spirit of the law indicates that applicants rejected by one county board shall not be licensed by another than the State Board, the Attorney-General gave it as his opinion that the letter of the law did not prohibit rejected applicants from going from county to county until a board might be found that would grant them license. It is too well known that men most ignorant and wholly incompetent have been rejected by several competent boards, but still went from county to county until a board was found the members of which, being on a level with the applicants, have licensed them and they are to-day plying their vocation at the expense and to the detriment of innocent parties who are not competent to judge of the proper attainments that ought to be possessed by persons pretending to practice medicine and surgery.

"To cure these defects in the law, it is suggested, *First*, to have one State Board of Health, which shall have exclusive power to grant license. *Second*, to have a board in each congressional district and a State Board of Appeals. *Third*, to amend the present law so as to require the members of county Boards to be graduates of medicine in good standing and to prevent a rejected applicant from applying for license to any other board in the State than the State Board. The idea adopted at the last meeting of the State Medical Society was the one recommended by the Committee on Medical Legislation, viz.: 'The appointment of one board known as a State Board, and the repeal of all existing laws on the same subject.' This is undoubtedly the simplest and best, but whether it could be accomplished against the opposition of members of the existing county boards, is questionable. At any rate the Committee of the State Society on Medical Legislation ought to commence to ask for the very best, and then if that cannot be obtained, substitute the next best, and so on until one of the proposed remedies shall be accepted by the Legislature and a law enacted accordingly."

Dirtiest City in the World.

Harper's Weekly says that the citizens of New York are not bashful nor backward in celebrating the greatness of the city, and in claiming for it a metropolitan primacy. They naturally believe that it is the centre and head of America, and cannot but suspect that foreigners from the effete despotisms must greatly exult when at last, after ages of oppression and suffering, they arrive in the bay dominated by Liberty Enlightening the World, step ashore at the Battery, and tread the Broadway of what must seem to them a kind of New Jerusalem.

It will not deny also that some foreign places have a certain historic and romantic, literary and artistic, interest, for which New York, busy with more important affairs, has not yet had time. But it will attend to them presently and outdo the world. Such is the cheerful complacency of this good city. Yet it is droll and undeniable that with all its grandeur and kindly condescension to other famous towns it cannot keep itself clean. Greece and Rome and Germany and France and England may strive in vain to overcome it in renown, but garbage and refuse and litter and dirt of every kind and degree utterly subdue it. It may spend millions and millions of dollars for what it calls its government, and savagely resent legislative interference, and maintain thousands of stipendiaries of every grade, and denounce Dirt in public meetings, and thunder at it in a free and forcible press, and swear at it in clubs, and scold at it in private parlors, but Dirt remains triumphant, and, proud of its supremacy, compels New York to be known as the dirtiest city in the world.

How the Homœopaths Look at it.

Many readers of the REPORTER will doubtless be interested to see the following extract from the *Hahnemannian Monthly* (*News and Advertiser*), February, 1891, which just now is making common cause with the Eclectics against a Medical Examiners' Bill in Pennsylvania and breathing out "threatenings and slaughter" against what it calls the "allopaths." The question, Why are we Homœopaths? this journal says was answered by Dr. Wells Lefevr (*sic*) in a paper, read before the Southern Homœopathic Medical Association. He presented the following conclusions:

Because Homœopathy has the only known law for the prescription of medicine. Its death-rate is the lowest, as is shown in the following comparative statistics of Homœopathic and Allopathic treatments, covering a period of five years. (Compiled by Dr. Jos. Buchner.)

Homœopathic Death-rate, per 100 cases treated: Erysipelas, 0.8; diarrhœa, 0.9; fevers, 1.2; typhus, 13.3; pleurisy, 1.3; inflam. of bowels, 6.1; typhoid fever, 8.8; scarlet fever, 2.9; dysentery, 7.1; heart affections, 15.5; apoplexy, 28.5; consumption, 38.6; yellow fever, 6.6; pneumonia, 5.2; duration of illness, 11.75 days.

Allopathic Death-rate, per 100 cases treated: Erysipelas, 23.0; diarrhœa, 21.2; fevers, 5.3; typhus, 16.0; pleurisy, 15.6; inflam. of bowels, 41.0; typhoid fever, 14.9; scarlet fever, 20.75; dysentery, 26.8; heart affections, 51.7; apoplexy, 48.3; consumption, 48.5; yellow fever, 23.5; pneumonia, 20.4; duration of illness, 28.9 days.

Homœopathy is chiefly employed among the well informed and cultured people. Homœopaths can procure lower rates of insurance, on account of the lower rate of mortality among them.

Our best records have been made in the South. There is employment for one thousand more homœopathic physicians in the South alone.

It was first introduced in America by Dr. Gram sixty-five years ago. Despite prejudice and calumny, it has grown until there are almost 20,000 homœopathic physicians in the United States to-day.

Our fifteen colleges cannot supply the demand, "Send us a Homœopathic physician."

Koch's Treatment Condemned.

At a meeting of the Belgian Academy of Medicine on December 27, M. Crocq (*Semaine Médicale*, December 31, 1890) denied "absolutely" that Koch's fluid is of any value in the diagnosis of tubercle. He had made injections in a patient suffering from phthisis, and in another the subject of acute pleurisy, "without a trace of tuberculous character;" in both, intense reaction took place. In other cases of "manifest" tuberculosis the injections were followed by no reaction, while in other cases patients suffering from non-tuberculous affections reacted strongly. With regard to its alleged curative action, M. Crocq has seen nothing of it; in his experience the remedy has done nothing but aggravate the evil. The lymph is, according to him, simply a pyrogenic agent, and he "denies utterly" that it has any specific effect on tubercule. "It produces a febrile movement, of variable duration, which causes an effervescence of the organism, various congestions in the skin and internal organs which have no relation to any tuberculous lesion; this congestion is more easily set up in diseased organs which have previously been attacked by an inflammatory lesion of any kind, and form the *pars minoris resistentiæ* of every organism. If the patient is attacked by cutaneous or pulmonary tuberculosis, the inflammatory process will take place in the affected organs, skin or lungs." This pyrogenic action may be useful in certain cases in which "substitutive inflammation" (such as is seen, for example, in the effects of nitrate of silver on a chronic ulcer) is beneficial. This, according to M. Crocq, is the whole secret of the action of Koch's remedy. If the "substitutive inflammation" may possibly have a favorable effect in some cases, it may do harm in others, a new inflammation being added to the pre-existing one, with fatal results if the affected organ is the larynx or the lung. In short, M. Crocq says, Koch's statements as to the diagnostic and curative value of his remedy resolve themselves into simple gratuitous affirmations, unsupported by any proof.—*British Medical Journal* (Supplement), January 10, 1891.

Shaving with Vaseline.

As nurses often are called upon to provide shaving materials we recommend the following: "A friend of mine a few months ago told me how to shave easily and painlessly, and I have never shaved in a barber's shop since. The plan is to use oil or grease instead of soap to prepare the chin and soften the beard. Vaseline is the most convenient, and it should be rubbed in quite freely. Then with a keen razor shaving can be done quickly and without the suspicion of pain. At first I couldn't reconcile myself to doing without the orthodox lather, and used soap after the vaseline had been applied. But the soap is really unnecessary, and shaving with oil or vaseline is cleaner as well as pleasanter, and what is more to the point there is no irritation whatever to the skin."—*Druggists' Circular.*

SUPPLEMENT TO THE MEDICAL AND SURGICAL REPORTER, FEBRUARY 28, 1891.

Suggestions for the Treatment of Tuberculosis.

After the sheets for the REPORTER of February 28 were printed, the following communication was received from Prof. Samuel G. Dixon.

TO THE EDITOR—*Sir*:—As I have never felt sufficient confidence against the toxic effect produced by subcutaneous injections of de-vitalized tubercle bacilli upon the animal economy suffering with tuberculosis, to risk its use in man, I have been using, for some time past, as stated in former communications, a long line of other agents, and I believe that it is only right and proper for me to again call attention of all workers in bacteriological investigation to what I have before strongly hinted at, when alluding to the effects of food, light, temperature, etc., upon the growth of the tubercle bacillus on an artificial culture pabulum.

Glycerine is one of the substances that I have employed in excess since 1889, as specially mentioned in previous articles, and with a marked effect on the growth of the tubercle bacillus.

After satisfying myself that I had pretty clearly established the effect of an excess of glycerine in the nutritive Agar-agar glycerine medium upon the growth of the organisms, I went on to introduce large doses subcutaneously into the animal economy, where a tuberculous process was going on.

In the few cases thus treated, there has, to all appearances, been produced a marked change in the tuberculous process in the animals. Therefore, to facilitate matters, I hasten to place before my colleagues the suggestion indicated above, and I should be very glad if they would themselves try its action in the animal economy, and report their observations.

Yours truly,

SAMUEL G. DIXON, M. D.

Bacteriological Laboratory, Academy of Natural Science, Philadelphia.

Liebreich's Remedy for Tuberculosis.

The cable brings news, dated February 25, that Prof. Liebreich had, on that day, described a new method of treating tuberculosis at a meeting of the Berlin Medical Society. The substance used is cantharidate of potash, which is administered in solution by systematic injections under the skin. Clinical experiments made by Drs. Fraenkel and Hermann seem to prove that the substance is remedial in tuberculosis and other diseases. Prof. Liebreich says that he is still carrying on his investigations, and that the announcement of his discovery was made prematurely, under pressure from Minister von Gossler, who is giving the matter much attention.

MEDICAL AND SURGICAL REPORTER

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Clinical Lecture.

TREATMENT OF TYPHOID FEVER: TWO RELAPSES AND OTHER COMPLICATIONS. — ASTHMA ASSOCIATED WITH EMPHYSEMA AND CHRONIC BRONCHITIS.[1]

BY JAMES M. ANDERS, M. D.,

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Typhoid Fever.

The case before you is the one of typhoid fever, which you will recall was presented at this clinic last Wednesday. Girl, A. A., domestic, 23 years old. Her family history is unsatisfactory. Six weeks before her admission she was taken ill in Pittsburgh, improved, came to Philadelphia, and was soon after admitted to the female wards of the Philadelphia Hospital and found to be suffering with typhoid fever—most probably a relapse.

She had, as you will remember, three or four serious complications, one of which was hypostatic congestion, the result of a weak heart, which in turn was due to parenchymatous degeneration of the myocardium. She had had two hemorrhages from the bowel, and after the second hemorrhage, one was in a state closely approaching collapse.

About January 1, after recovering from her first relapse and after having had a subnormal temperature for about one week, she got up at night during the absence of her attendant, and ate heartily of candy, apples and cake. The next day her temperature was 104°, and this rise of temperature was followed by the other symptoms of the second relapse which was attended with moderately high temperature.

Errors of diet cause a relapse because of the latent virus still existing in the system. You will also recall the affection existing in the leg, which was swollen and painful to the touch. The swelling was localized over the middle third of the fibula and outer aspect of the os calcis, not due to thrombosis, but most probably to periostitis, or possibly to a pyemic condition; as small abscesses under the skin occur after typhoid fever. A pyemic condition has not, however, been developed. There exists tenderness only over the os calcis and outer third of the fibula. Making pressure over the fibula, we find it thickened and roughened as compared to that of the other side. There is pain developed, especially at night. Thickening of the bone, tenderness on palpation and pain at night are certain evidences of periostitis. As a rare sequel, it comes on two or three weeks after convalescence has set in; but it may occur during a relapse, as in this case. During the attack there has been some bronchitis and, later, pneumonia. You will recall the previous history; that there existed a feeble heart, which leads to hypostatic congestion of the lungs, and that there was no active bronchitis. The physical signs were: impairment of resonance on percussion and, later, crepitant râles.

During the patient's present or second relapse she developed pneumonia. In her case, in addition to the physical signs at the right base, there was rusty sputum, which indicated a lobar pneumonia. In patients much exhausted, as this one is, you do not have all the characteristic physical signs and symptoms of pneumonia. She has not the signs of collapse of the lung or bronchopneumonia. You are apt to have hemorrhagic infarction, especially where there is a pyemic condition, and when it occurs the emboli will lodge in the lower lobe of the right side. This is the result at times of

[1] Delivered at the Philadelphia Hospital.

venous thrombosis from feeble circulation, as you may remember, in her case during the former relapse. When pulmonary hemorrhage occurs, there will be dulness on percussion, feeble respiratory murmur and frequently bronchial breathing, with expectoration of a bloody or sooty-looking matter—not the characteristic sputum of pneumonia as in this case—with great pain. Another complication, which occurs once in about ten cases, is the albumin in the urine. In this girl's urine, it was found ten days ago in abundance. During her first relapse no albumin was found after repeatedly testing the urine. When considerable albumin is found during the course of a case of typhoid, it is good evidence of desquamative nephritis. During her first relapse the girl had four complications, and during her second relapse, three. The chief physical signs of the pneumonia have disappeared, but there still remains here some dulness and feeble respiratory murmur. The prognosis in relapse is good, provided the previous attack has been severe; but when the primary attack is mild the prognosis is bad.

When called to treat a case of typhoid fever, first place the patient in the largest and most airy room, with an open grate if possible; since this is preferable to a window as a means of ventilation. See that the sanitary arrangements are as perfect as possible. The leading indications calling for treatment are, to support the vital functions, to control the fever when high, and to arrest or modify the complications and sequelæ. As long as the temperature does not rise above 103°, there is, as a rule, but one object to fulfil, namely, to support the bodily functions. Attention must first be paid to the feeding. Food should be given at regular intervals of two hours each, and should consist mainly of milk. Should this be found to disagree, give it peptonized, that it may the more easily be assimilated. If it still disagrees, give, before each feeding, a mixture consisting of two grains of pepsin and five minims of dilute muriatic acid in syrup and water. Well-cooked farinaceous articles, such as barley, may be added to the milk; animal broths, in small quantities, may also be allowed. The system must also be sustained. This is best accomplished with quinine. If the temperature does not run high, two grains four times daily is sufficient. In the third week, gentle stimulation should be given, of about one-half ounce of either brandy or whiskey every four hours. In the severe forms, we must also diminish the fever and arrest complications and sequelæ. The reduction of the fever is sometimes imperative. This is best accomplished by the cold-water treatment. Do not be afraid to sponge the patient freely. Instruct the nurse to sponge in succession the face, neck, arms and chest as long as agreeable to the patient. If this does not suffice to bring down the temperature, use cold compresses, of ice-bags or cloths wrung out of cold water. Often, when placed to the head, this will reduce the temperature of the whole body, quiet the delirium and produce sleep.

If this does not suffice to reduce the temperature, place the cooling applications also on the stomach. Do not use the cold bath, unless the tub can be brought to the side of the bed, and only when the temperature is dangerously high or profound coma exists. Do not leave the patient in the bath longer than eight or ten minutes, and when he is taken out wrap him well in blankets, giving stimulants if he be exhausted.

In the way of internal antipyretics, do not use them unless the morning temperature is at or above 103°, no matter if the evening temperature should be 104°. If both morning and evening temperature is high, or if there be but slight remissions, you may resort to them early in the attack, if cold water does not suffice.

A number of remedies are advocated: antipyrin, antifebrin, phenacetin, salicylate of sodium, quinine, etc. Sodium salicylate disorders the stomach and sometimes causes albuminuria. Don't use it. I have found antifebrin, given in doses of two grains at night, to act as effectually as larger doses (ten grains for instance), and thus have avoided the danger from collapse. Phenacetin is said not to depress; but do not give it in large doses. When the temperature is dangerously high, then you may resort to heroic measures; indeed, this may be the only means of saving your patient. You may use the bath-tub, or rub the surface with ice, which answers the same purpose, or as a *dernier ressort*, give a large dose of some internal antipyretic.

The treatment of complications is all-important. Attend to the most urgent symptoms, one of which is headache; three grains of phenacetin, with twenty grains of sodium bromide, given occasionally will mitigate it. When there is distention of the abdomen,

do not use the hypodermic needle—use turpentine stupes. If this fails, give turpentine internally in emulsion. Diarrhœa, when prominent, should be treated with mild measures first; bismuth in full doses will generally control it, or a mixture of equal parts of tincture of catechu and paregoric gives good results. If it is not controlled in the manner stated, give one-quarter grain of nitrate of silver with opium, in pills every three hours, or two grains of acetate of lead every four hours, or suppositories of tannic acid and opium.

Of complications, perforation is the most serious, and requires active and timely treatment. In the books it is generally stated that opium is to be given in large doses; thus, metaphorically speaking, the bowel is placed in splints and peristalsis is arrested. This is unnecessary. Enough opium should be exhibited to relieve pain, and saline laxatives should be administered until a gentle movement is produced. Rochelle salts, in doses of a drachm every two hours, is the best for this purpose. Should thrombosis occur, elevate the limb, rub gently with vinegar and water or laudanum, and give internally stimulants, especially carbonate of ammonium. The pneumonia was here treated in the same way as the hypostatic congestion, because the indications were the same, namely, to stimulate and support well the patient. In this case, for the hemorrhages of the bowels, we employed ergotine hypodermically, and cold externally. Astringents may also be used for this accident.

With the above plan of treatment, you should not forget to disinfect thoroughly the stools. There is no longer any doubt but that the disease may be contracted through the lungs; hence it is well to have doors, floors and window ledges washed with some disinfectant in solution, or better still, after the patient leaves his room, to have it fumigated.

Asthma and Emphysema.

This man is 48 years old, and a sailor. His father died of pneumonia at 58, his mother of paralysis at 85 years. One brother died of asthma; another brother, living, has asthma. As a child this man had measles and scarlet fever. In India he had jungle fever. His present trouble began when he was 5 or 6 years old; at first the attacks of dyspnœa always came on at night, later they would occur during the day, the paroxysms increasing in severity. Between the attacks he would feel quite well. When young he learned the tanning trade, but early in life he gave it up, as he found it made his condition worse. Changing his occupation, he took to the sea and found the tropics agreed best with him. For twenty-five years he carried stramonium leaves with him, which he would steep in a solution of nitrate of potassium, burn them, and inhale the fumes. This gave him immediate relief; later, when the paroxysms increased in number and severity, the remedy lost its effect, until finally it lost control altogether. When in ports, he would obtain remedies from physicians for the attacks. For the last few years his condition has grown steadily worse. About the middle of November, 1890, he was shipwrecked at sea, where he remained three days without food and shelter.

Since then the attacks were notably increased, and he had them worse than ever. He stated that he has tried all the remedies ordinarily used, but they failed to relieve him. His last attack continued four hours, during which time he smoked stramonium constantly without good effect. January 11, when admitted to the Hospital, he was greatly cyanosed, his face, lips, nails, lids and eyes were blue, and his chest immovable. He was given at once nitrite of amyl by inhalation, with but momentary good effect; later he was given chloroform by inhalation, with but temporary relief. He was then directed by one of the residents to have tincture of conium, f℥ss, every half hour until four doses had been taken. When he had taken the third dose his breathing grew suddenly better. Obviously, the remedy deserves further trial. On admission his chest was as you see it now. It is greatly distended in all directions, is distinctly barrel-shaped. The neck seems short, from the chest being drawn up by the muscles of the neck, with marked depressions above the clavicles. The ribs are prominent anteriorly, and there is but little lateral movement of the chest in respiration. The stomach moves forward with each inspiration, which indicates a condition far advanced in emphysema. Percussion gives great hyper-resonance, almost tympanitic, while over the heart we get lung resonance. The cardiac dulness commences as low down as the sixth rib. Normally it should begin at the fourth, and there is only a very limited amount of dulness on account of the overlapping of the lung. The apex impulse is

lower than it should be. Below the costal border of the right side there is dulness, owing to the liver being depressed; and the lung resonance extends more than one inch lower than it should. In advanced cases of emphysema there is a marked degree of vesico-tympanitic resonance and great displacement of the heart and liver, as in the present case—a condition which is sometimes mistaken for pneumo-thorax. In the latter affection, you have, as a rule, the history of phthisis, of the occurrence of great pain followed by the signs of air in the chest. The breathing becomes at once difficult, the pulse rapid and feeble. Pneumo-thorax generally occurs on one side, though it may be bilateral, when it is more difficult to diagnosticate. The pain may be wanting, in which case, rely only on the physical signs in diagnosticating between this disease and emphysema. Inspection and palpation give the same result in both affections, except over the seat of effusion in pneumo-thorax, where vocal fremitis is wanting.

Percussion resonance in pneumo-thorax is more hyper-resonant, is frequently tympanitic; and where effusion occurs, a sharp line of dulness can be drawn at the level of the liquid, which line changes with the position of the patient. Over the seat of the effusion, there is flatness; but there is none in emphysema. On auscultation we get weak respiratory murmur, or the amphoric respiration and voice, which does not occur in emphysema; also metallic tinkling, and, on succussion, the splashing sound. In pneumo-thorax the heart and liver are usually displaced more than in emphysema, but rarely more than you see in the patient before you, suffering from emphysema. An enlarged heart may be mistaken for emphysema, because the apex is depressed; but the presence of clear percussion resonance over the heart, together with the symptoms belonging to emphysema, would aid in establishing the diagnosis. I want to lay stress upon the fact that you may have cardiac hypertrophy associated, and not be able to detect it.

The diagnosis of emphysema is almost certain when asthma is associated with it, as in this case. Here we have the history of asthma in the family, it being hereditary, which, however, is also the case with emphysema. The man gives us a clear history of chronic bronchitis, which began before the emphysema. The latter is probably due to the former disease. The prognosis, as far as immediate danger to life is concerned, is fair. The patient should be saved as much as possible from the exciting cause of asthma. A residence in a tropical climate would doubtless give him the best chance for increase of years.

As to treatment: It is necessary to prevent the degeneration of the air vesicles as much as possible by giving iron and arsenic in small doses, long continued. The ideal treatment would be to breathe into rarefied air and inspire condensed air. An instrument for this purpose can be obtained. The asthma should be treated with stramonium in cigarettes, and inhalations of chloroform; morphia hypodermically is an efficient remedy. Tincture of lobelia, gtt. x, every half hour, may be given during the paroxysms, if it do not cause too much nausea. Potassium iodide may be administered during the intervals, or the following recipe, when there is more or less active bronchitis and considerable expectoration associated with the emphysema, as in the present case:

℞ Syr. acid hydriodici . . . . . f℥ ii
Syr. scillæ . . . . . ℥ iss
Spts. chloroformi . . . . . ♏c
Syr. pruni Virgin. . . . . q. s. ad. f℥ iv

M. Sig. Teaspoonful every three hours in water.

COMMUNICATIONS.

PRACTICAL USE OF THE METRIC SYSTEM.

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By an act of Congress, in 1792, a decimal system of currency was formally adopted for this country, necessitating the adoption of conceptions of value to a unit less than a quarter as great as the English pound, with which the people are familiar. For the last few years a decimal system of measuring drugs, established upon a scientific basis, with a simple and logical connection with other systems of mensuration, and already in practical use in other countries, has been awaiting recognition by the medical profession in England and in the United States.

The prime unit of this system is the meter, a line one-tenth millionth of the length of a quadrant of a terrestial meridian. A

cube constructed on the decimeter (one-tenth of a meter) is the unit of capacity, and is called the liter; it differs but little from our quart. The weight of one cubic centimeter of pure water at its point of greatest density, 40° C., and in a vacuum, is the unit of weight, and is called a gram. A liter, therefore, contains 1,000 grams of water and a little calculation will show that the gram is equivalent to about one-quarter of a drachm, or fifteen and four-tenths grains. In all metric scales the prefixes deka, hecto and kilo are used to form the names of units 10, 100 and 1,000 times the prime unit. The kilogram, for example, is equal to 1,000 grams, and it is the unit of weight in small commercial transactions, being equivalent to two and two-tenth pounds.

The prefixes deci, centi and milli indicate, respectively, one-tenth, one-hundreth and one-thousandth of the prime unit.

As far as prescription writing is concerned we need no other terms than gram, centigram and milligram, omitting the words decagram, hectogram, kilogram and decigram, just as in speaking of money we discard the words eagle and dime. For example, the expression 10.25, referring to money, would be read "ten dollars and twenty-five cents," not "one eagle, two dimes and five cents." Occurring in a prescription, it would be read: "ten grams, twenty-five centigrams," instead of "one dekagrame, two decigrams and five centigrams." As we have to deal more with little things in medicine than in business, the milligram, unlike its analogue mill, in our money, assumes considerable importance.

The cubic centimeter, familiarly abbreviated and pronounced "c. c.," is often used as a liquid unit, corresponding to the gram. To avoid confusion with the centigram, it would be well to drop the expression "cubic-centimeter" and to use the word gram or fluid gram, instead. It may be remarked in passing, that the relation between the gram and cubic centimeter is nearly the same as exists between the grain and minim; but whereas the correspondence between the gram and cubic centimeter is scientific and exact, that between the grain and minim is merely approximate.

Advocates of the metric system often insist upon the dispensing of liquids by weight instead of volume. There can be no reason why the gravimetric, as opposed to the volumetric, method should be more closely linked with the decimal system than with the apothecaries' system. For purely scientific purposes, the weight of a substance is a more accurate expression of its quantity than the space which it occupies. On the other hand, our conception of the quantity of a liquid is more naturally connected with its volume than with its weight. The relation between the volume and the weight of a liquid is so little affected by the slight variations of temperature and atmospheric pressure in different drug-stores at different times; the loss by evaporation so far exceeds the greatest possible variation due to changes of temperature and pressure; the use by the patient of scales, or even of accurate measures in taking single doses, is so impracticable; and, lastly, our estimation of the proper dose of a drug is so much a matter of approximation—that an insistance on the less convenient method of dispensing liquid drugs by weight is very much like straining at a gnat after swallowing not only the camel, but a considerable portion of the rest of the menagerie.

What are the advantages of the metric system? Briefly speaking, the same as those which our decimal monetary system possesses over that of Great Britain. In detail they are:

(1). A simplification of the process of multiplication in constructing a prescription. (2). A simplification of the process of division in calculating from a complete prescription the amount of each drug given at a single dose. (3). The ease with which the proportion of drugs in antiseptic solutions, liniments, ointments, etc., may be indicated. (4). The use of units small enough to express conveniently the doses of very powerful medicines. (5). A close correspondence between our already existing conceptions of value as expressed in dollars, cents and mills, and the powerfulness of drugs as expressed by their metric dosage.

It is probable that an Englishman coming to this country will derive no immediate benefit from our system of money. Since he thinks in pounds, shillings and pence, it is of no advantage to him that cents can be converted into dollars by moving the decimal point; for before he can have a clear conception of the value of an article, cents must be converted into units with which he is familiar. So there is no benefit to be derived from the mere writing of prescriptions with Arabic figures and in terms of French units with which we are unfamiliar. Not until we can think naturally in the metric

system are we profited by its use. It is sheer nonsense for a man to write such a prescription as this:

℞ Argenti nitratis 13
Aquæ dest. 31.00

He is thinking of "two grains to the ounce," and it is quite likely that the druggist will fill the prescription, using the two-grain weight and the ounce measure. Not only is nothing gained by such "metric" prescribing, but there is the positive danger that, in the conversion from one system to the other, some error will be made. "Two grains to the ounce" represents a proportion of 1 to 240, or near 1 : 250. The prescription should, therefore, take the following form:

℞ Argenti nitratis 10
Aquæ dest. 25.00

In writing for medicine which is to be measured in doses, we must bear in mind the number of doses needed and the size of the measure from which the medicine will be given. The following table shows the relation between the ordinary dose-measures and the metric units:

One drop	.03
An old and worn teaspoon	3.50
A new teaspoon	5.00
A dessertspoon	10.00
A tablespoon, brimful	15.00
A tablespoon, heaped as much as the cohesion of the liquid allows	20.00

Suppose that we have to deal with a transient case of diarrhœa. We first set down the ingredients of our prescription without reference to the quantity to be given. We next decide upon the number and size of our doses. Ten doses will probably suffice, and a dessertspoonful (10.00) is a convenient amount for each administration. We therefore order enough of the vehicle to make 100.00. Our prescription is now in the following form:

℞ Ext. hæmatoxyli
Ac. sulph. arom.
Ol. cajuputi
Mucil. acaciæ
Syr. simplicem ad 100.00

To complete the prescription, we multiply the dose of each ingredient by ten. We may leave the amount of the mucilage to the discretion of the pharmacist.

℞ Ext. hæmatoxyli 2.50
Ac. sulph. arom. 5.00
Ol. cajaputi 2.50
Mucil. acaciæ . . . . . q. s.
Syr. simplicem ad 100.00

S. Dessertspoonful (= 10 c. c.) every three to six hours.

Most medicines will be given by the teaspoonful, and twenty or thirty doses may be conveniently dispensed at once. The teaspoonful may be reckoned either as four or five fluid grams. The use of the latter number is preferable, and, when accuracy is necessary, five fluid grams can be marked off on a test-tube by the apothecary. The ordinary mixture will, then, amount to 100.00 or 150.00 fluid grams.

The following prescriptions may serve as an illustration of the method of calculating a single dose:

℞ Ammonii chlor. . . . . 5.
Ol. eucalypti . . . . . 10.
Mucil. acaciæ . . . . . q. s.
Syr. pruni Virg. . . . . 50.
Aquam ad . . . . . 100.

S. Teaspoonful after meals.

℞ Calcii lactophos . . . . . 4.
Ol. morrhuæ
Mucil. acaciæ . . . . . āa 150.
Ol. amygd. amar. 10

S. Tablespoonful after meals.

The first prescription evidently consists of twenty five-gram doses. One-twentieth of 5 grams is a quarter of a gram, or 25 centigrams; one-twentieth of 10 is ½, or 50 centigrams; one-twentieth of 50 is 2½. The second prescription contains twenty doses each of fifteen grams. Half of each fifteen grams is cod-liver oil. Twenty centigrams of calcium lactophosphate are given at each dose, and half a centigram, or five milligrams of oil of bitter almonds. The last is rather a small dose, but the chief use of the essential oil in the emulsion is as a flavor.

Will the reader please contrast mentally the foregoing process of multiplying or dividing by 10, 20 and 30 with the corresponding multiplication or division by 12, 16, 24, 32, and the conversion of grains into drachms, and of drachms into ounces, or, *vice versa*, by the use of the numbers 60 and 8?

In prescriptions for external use, not only the amount but the proportion of each ingredient is plainly indicated. For example:

℞ Plumbi acetatis
Tinci sulphatis . . . . . āa 1.
Ext. hydrastis fl. . . . . 25.
Aquam dest. ad . . . . . 500.

Those who have been accustomed to remembering proportions as so many grains to the ounce should bear in mind that each grain to the ounce represents a strength of

about 1 to 500. In making antiseptic solutions, the physician will find in almost every household a close approximation to the 1,000 gram measure in the shape of a quart cup.

Only a few of the recently discovered alkaloids and glucosides can be given safely in doses of more than a fraction of a grain. The use of fractions is inconvenient in remembering the dose, in writing the prescription and in compounding it. The metric system, on the other hand, furnishes a unit, the milligram, so small that nearly all doses can be written in integers. To the best of the writer's knowledge there is no substance which could not be given to an adult with safety in a dose of half a milligram.

In our money matters we have not only the universally recognized unit but other amounts whose frequent use has elevated them to the position of auxilliary concepts of value. Many of these are spoken of in arithmetics as aliquot parts of a dollar. 2. 3, 5, 10, 12½, 15, 20, 25, 30, 33⅓, 50, 66⅔, 75, are examples of such values expressed in cents. 7, 11, 19, 47, etc., are examples of numbers to be avoided both in price lists and in dosage.

In becoming familiar with the metric system, it is well to group together, as far as possible, drugs of the same degree of *powerfulness*, and to think of the appropriate dose of a drug not merely as a quantity or weight but as a number which assigns to the drug its place in a scale. For example, if we pay twenty-five cents for an article we think of the twenty-five cents not merely as so much expenditure, but as an index to the value of the article when compared with the price of other similar articles. So, if the dose of a drug is 25 centigrams, we should think of the 25 centigrams, not as an arbitrary quantity, but as an expression of the *powerfulness* of this drug when compared with others. The following table of what may be termed dose values will prove useful in estimating the doses of other drugs which we may from time to time employ and the strength of which we know to bear a certain relation to that of the drugs mentioned :

.001—Atropine, hyoscyamine, hyoscine, physotigmine.
.002—Strychnine, picrotoxin, nicotine.
.005—Concentrated preparations of arsenic, gold salts, mercuric salts.
.01—Morphine, apomorphine, emetine, pilocarpine.
.02—Salts of copper, silver and zinc as nervines. Most of the poisonous extracts.
.05–.10—Most iron salts, codeine.
.15–.25—Most volatile oils, lead acetate, caffeine, acetanilide.
.25–.50—Ammonium carbonate and chloride, quinine, antipyrin, bismuth sub-nitrate and sub carbonate.
1.00—Most hypnotics, salicylic and benzoic preparations, many moderately strong tinctures and fluid extracts.
2.–5.—Most tinctures and fluid extracts.
10.–15.—Syrups, infusions, etc.
10.–25.—Many saline cathartics, castor oil.

Although the metric system is best learned independently, those who are already familiar with the apothecary's system will need a scale of equivalents, and the following is approximately correct :

$\frac{1}{60}$ grain =	.001	ʒj =	4.00
$\frac{1}{6}$ " =	.01	℥j =	30.
3 grains =	.20	Oj =	500
4 " =	.25		
15 " =	1.00		

In changing from the old to the new system, do not first write the prescription in the former system and then attempt to give its equivalent in the latter. After writing a list of the ingredients of the prescription, order the vehicle up to 10, 20 or 30 times 5. c. c. Then translate separately the single dose of each drug into metric terms, adding or subtracting a little if necessary to make the amount an aliquot part of the gram. Then multiply by the number of doses in the prescription. In this way—to borrow an expression from the teacher of languages—the metric prescription will be idiomatic and not a literal translation of one written in the old system.

The writer has been led to present this article because he realizes that many of the suggestions contained in it would have saved him much trouble if they had been available when he began to learn the use of the metric system. His own experience has been that one not too long accustomed to the apothecary's system can learn in a few weeks to use the metric system naturally and easily, and that its simplicity more than compensates for any difficulties which are met in the transition from one system to the other. A practical experience of nearly two years has shown him that, in Buffalo at least, pharmacists are invariably as well equipped to fill metric prescriptions as those written in the old system ; and that, while the medical men who use the metric system are in the minority, the minority is by no means insignificant, either in numbers or in influence.

TREATMENT OF CLUB-FOOT, PAST AND PRESENT.

BY LUCIA REDDING THOMPSON,

PHILADELPHIA

A retrospective view has led me to compare the past and present treatment of club-foot, and to note a few of the many progressive steps which have given this wonderful century its pre-eminence. According to tradition, the custom of distorting the feet of Chinese women is a relic of an edict to render the deformity of an imperial child less noticeable by making the malformation common, thus confessing the impossibility of cure.

It is well known that Lord Byron abandoned any attempt at correcting his deformity after years of treatment. Previous to the time of Stromeyer, the treatment of club-foot was purely mechanical, and the orthopedic surgeon stood upon the level of the mere instrument maker, or upon the border line of empiricism. In the light of today, we can only pity those "cheated by dissembling nature deformed, unfinished, sent into this breathing world scarce half made up," at a time when men were afraid of the knife, and such measures as resection of the tarsus, tarsal osteotomy, open incision, tenotomy, etc., were unknown. With the development of antiseptic and aseptic surgery, radical measures have been adopted, and at the present time, few surgical procedures are more precise in their indications or more certain in their results.

The club-foot deformity is usually congenital, but it may be acquired after infantile paralysis, accident, or that inflammatory condition of the fibrous tissues about joints covered by the vague term "rheumatism."

Vague and various theories have been advanced in explanation of the congenital variety of club-foot. Maternal impressions, compression in the uterine cavity, lesions of the nervous system, etc. Heredity has also been strongly declared to be an etiological factor, and as such we must recognize it. At the same time we must admit that, though living in an age when all the symptoms of nature are exhibiting their mysteries, with ample facilities for investigation, the laws of heredity baffle the scientist, and we know no more than we know how it is that children inherit the features of their parents. We must admit that we are ignorant of the causation of club-foot, and unable to give an explanation of the phenomena of its development.

This position of the tarsal bones varies with the variety. In the congenital form, the scaphoid will be found articulating with the side of the head of the astragalus, rather than with the anterior surface. The cuneiform bones must follow from their close connection. The os calcis is usually found in the vertical position. The astragalus is so much distorted that it cannot be recognized by the most profound anatomist.

The only rational treatment consists of a combination of operative and mechanical means. The age at which treatment should be commenced is a matter of discussion. Many claim that operation should not be done before the end of the first year. Dr. H. Augustus Wilson, Professor of Orthopedic Surgery in the Philadelphia Polyclinic, advises early operation. As it is well known that in infancy and early childhood the ends of the bones are largely cartilaginous, it is therefore rational to believe that the sooner the foot is corrected the better. Prof. Wilson advises tenotomy with subcutaneous division of fascia, *in mild cases*, followed by some form of mechanical retention, until the bones adapt themselves to the normal position, and the muscles recover their tonicity. After operation, the foot should be placed in the corrected position by manual force and retained with a light plaster-of-Paris bandage.

In the New York *Medical Record*, Dr. A. M. Phelps reports one hundred and ninety-six cases treated by direct open incision since 1888. The advantages of open incision must be apparent. The surgeon becomes master of the situation, as he has every facility for complete division of all contracted tissues. Arteries can be spared by careful dissection, or cut and tied. In obstinate or inveterate cases, the ligaments should be divided; open incision renders this possible.

Dr. Thomas G. Morton's operation for club-foot cannot be too highly commended. He recognizes the astragalus with its forward dislocation as a check to the action of the joint, or as a foreign body, and therefore removes it. His results are good, as his series of cases at the Orthopedic Hospital will prove.

Again, for a moment, I would look backwards. Could a man of the last century have seen in a vision of the future the results of measures put into execution by men of this marvelous era, his heart would have

leaped, his nerves thrilled; for plainly he would have seen the hereditary curse lifted from those apparently condemned by nature. And instead of seeing behind the faint tinges of an expiring sunset would have seen all the glory of the daybreak decking the skies before.

GASTRIC ULCER.[1]

BY M. J. WEBER, M. D.,
LOWER PROVIDENCE, PA.

I purpose in this paper to call attention to an affection of the stomach, which, by its protracted course and the insidious manner of its development, along with the entire absence of any characteristic symptoms in many cases, often destroys life before the real nature of the malady is even suspected. I refer to gastric ulcer, the simple round ulcer of the stomach.

This disease, which is common in some parts of the continent of Europe and in England, is, according to Da Costa, comparatively rare in this country. Professor Welch states that he met with six cases of open ulcer of the stomach in about eight hundred autopsies. It has been my fortune to meet with two fatal cases of this disease, in which the diagnosis was verified by *post-mortem* examination; and two other cases in which I had diagnosticated gastic ulcer, one patient recovered under treatment, while the other passed out of my care and died, no autopsy being held.

Gastric ulcer may cause death in three ways: First, from perforation of the walls of the stomach and escape of its contents into the abdominal cavity; second, from perforation or erosion of blood-vessels and consequent hemorrhage; third, from gradual exhaustion.

Inasmuch as each of my two fatal cases represents one of these modes of death, a short history of each of them may not be uninteresting.

Case 1. Mrs. Y., seventy-two years old, while sweeping a bed-room was suddenly seized with a feeling of faintness, and immediately began vomiting bright red blood in large quantities. She sank to the floor and was lifted into bed. When I saw her, about fifteen minutes afterwards, she was vomiting partly coagulated blood profusely. I had some tincture ferri chloridi with me, which I gave her in teaspoonful doses, somewhat diluted, and the hemorrhage soon ceased. The woman vomited no more blood for four days, when the hemorrhage began again, and continued in spite of all treatment for three days, until she died exsanguine, seven days after the initial hemorrhage. In the four days during which she had no bleeding, she passed several dark, tarry-looking stools, which showed that blood had passed downward into the intestines.

The autopsy showed the stomach full of clotted blood, which, being turned out, revealed an open ulcer three-fourths of an inch in diameter on the posterior surface of the stomach, one and one-half inches to the right of the cardiac orifice and near the lesser curvature. On the anterior surface was another open ulcer, directly opposite the one on the posterior surface, and slightly larger, but not so deep. Close by the ulcer on the anterior surface, was a large cicatrix, which no doubt marked the site of an ulcer that had healed. The ulcer on the posterior surface had a hole in its floor large enough to admit a silver probe. This hole opened directly into the splenic artery, which was firmly adherent to the stomach at this point, and very calcareous. The cause of the hemorrhage was thus fully explained. The mucous membrane of the stomach and duodenum was thickened and dark red, and showed everywhere the marks of chronic catarrhal inflammation. The gall-bladder was completely filled with gall-stones. Over four hundred were taken out. This woman had never complained of anything more than a little regurgitation occasionally after meals, and the ordinary symptoms of dyspepsia. There had never been any biliary colic.

Case 2. Mr. K., farmer, sixty-nine years old, came to my office complaining of trouble in his stomach. He had walked about one-third of a mile, and seemed greatly fatigued. His symptoms for the last three years had been: partial loss of appetite, a feeling of uneasiness and fulness in the stomach after eating, constipation, flatulence, heartburn and eructations of gas; in short, all the symptom of chronic gastritis. There had never been any great pain in the stomach, nor any vomiting or hemorrhage. His symptoms during the last year had been gradually growing worse, and during the last twenty-four hours he complained of

[1] Read before the Montgomery County Medical Society.

considerable pain in the epigastrium, and felt very ill in general. His tongue was coated, his pulse was 90. Percussion over the abdomen elicited great tenderness in the epigastric, umbilical and right hypochondriac regions. This tenderness was so great that a satisfactory examination could not be made. I diagnosticated a local peritonitis, caused most likely by a perforating ulcer of the stomach or duodenum, and advised the patient to go to bed, setting forth the gravity of his condition, and prescribing opium for him. He went home, but did not go to bed, and the next day I found him sitting in a chair, vomiting frequently, and complaining of pain over the whole abdomen. He now had the symptoms of a general diffuse peritonitis. Eight days afterwards he died. The autopsy revealed a diffuse peritonitis, the intestines being matted together and adherent to the whole anterior surface of the abdomen. Examination of the stomach revealed an open round ulcer one and one-fourth inches in diameter immediately adjoining the pyloric orifice, and on the lesser curvature. The edges of the ulcer were thickened, and a perforation in its floor communicated with its peritoneal cavity.

The history of these two cases shows how serious a disease gastric ulcer is, how insiduous and protracted may be its course and how great is the importance of its early recognition.

It is not my intention, in this paper, to enter into any detailed consideration of this disease. A short description will suffice.

The characteristic symptoms of gastric ulcer are pain, hemorrhage from the stomach, vomiting and disturbances of digestion. Pain is the most constant symptom, and it usually becomes more acute within a half hour after eating. Many cases of ulcer of the stomach occur, however, which present nothing but the symptoms of chronic gastritis. Gastric ulcer occurs with greater frequency among women than among men. According to Dr. Brinton the proportion is two women to one man.

The cause of gastric ulcer is obscure. Abercrombie and Cruveilhier believed it to be the result of chronic gastritis. Rokitansky and Virchow assign its origin to a local embolism or thrombosis. Riegel ascribes the chief cause to a constant state of hyperacidity, while Engel held that gastric ulcer was not due to any one cause, but might originate in a variety of ways. This was also Brinton's view.

Gastric ulcers occur mostly on the posterior wall of the stomach, on or near the lesser curvature, and usually near the pylorus. They are usually round, and if recent have sharp edges and look as if a circular piece had been cut out with a punch. Old ulcers, however, become somewhat irregular, the greatest loss of substance being in the mucous coat.

The duration of gastric ulcer is variable. It may exist for years before causing much trouble, and a fatal termination may occur within a few days after the initial lesion. Brinton states that he had a case under observation for thirty-five years, while Niemeyer relates the case of a physician who died from a perforating ulcer of the stomach eight days after he felt the first symptoms. Probably from three to five years is the average duration. In the second of the cases I have described the ulcer certainly existed for three years.

In many cases of gastric ulcer the diagnosis is easy, while in other cases it is impossible or amounts only to a suspicion. The two diseases with which gastric ulcer is most likely to be confounded, in the absence of a tumor, are nervous gastralgia and chronic gastric catarrh. In case of doubt, however, it is best to put the patient for a time on the proper treatment for gastric ulcer.

What should be the character of the prognosis in this affection? It seems to me that, in view of the danger of sudden perforation or severe hemorrhage, the prognosis should not be too favorable. Then, too, cases often relapse after recovery has begun. The case mentioned above as having ended in recovery, relapsed about six weeks after treatment was begun. The patient thought she was well, went visiting and ate heartily of beans, cold-slaw and ham, and all her former symptoms returned. Two months more of careful treatment cured her.

In treating gastric ulcer, diet is very important. We should seek to remove all sources of irritation from the ulcer, so that the process of repair may go on uninterrupted.

This may be accomplished by giving the stomach complete rest and nourishing the patient entirely with nutrient enemata. This method of administering food, however, presents many difficulties in practice, and I believe is rarely required. By a proper selection of the diet, the patient can be more satisfactorily nourished by the stomach,

without interfering with the healing process.

The most valuable article of diet in this disease is milk. Under an exclusive milk-diet, the pain and vomiting cease and cicatrization takes place. The patient should take from one to two quarts a day. Where plain milk disagrees, peptonized milk may be tried. This preparation has proved exceedingly valuable in the treatment of gastric ulcer. After three or four weeks, meat broths, farinaceous foods, soft-boiled eggs, etc., may be given. For at least three months the patient should be confined to easily-digested food; and when there is reason to believe that the ulcer is healed, the usual diet may be gradually resumed.

The drugs most used in the treatment of gastric ulcer are subnitrate of bismuth and nitrate of silver. I have carried out Trousseau's plan of giving these drugs in succession every two weeks, with success. By this method the danger of causing argyria is averted.

The best way of relieving the pain of gastric ulcer is by the use of opium in some form; but, in prescribing opium in this disease, the physician should not forget the danger of establishing the opium habit. Besides this, opium retards digestion and increases the constipation already present.

The treatment of complications, such as vomiting, hemorrhage, dyspepsia, etc., is the same as when they occur under other circumstances.

For the relief of the constipation, I found no drug or combination of drugs to answer as well as maltine with cascara sagrada.

RECENT MEDICAL JURISPRUDENCE.

HENRY A. RILEY, ESQ.,
NEW YORK.

A recent case in New York is of much interest to physicians, as it bears on the question of collecting bills. In this case, the physician seems to have been at fault, and the Court refused to come to his aid.

The circumstances were as follows: The mother of a patient went to the physician and paid him the amount asked for on account of his services, and received a receipt "in full for medical services." The mother had requested the services, and was understood by the physician to be acting for the patient in making the payment. The latter, however, did not authorize the payment. The physician afterwards brought a suit against the patient, to recover a further amount, claiming that the services were worth more than he had received. There was no satisfactory explanation given of the receipt in full, and the physician did not show that the receipt was, in fact, for part of the services, instead of them all. The Court held, on this point, that the receipt in full was *prima facie* evidence of payment for everything, but was subject to explanation showing a misunderstanding. The physician failed to show this, but relied mainly on the testimony of experts to prove that the services were really worth more than he had received. The Court refused to be influenced by such testimony, and said that when the amount due had been adjusted and paid, the opinions of other persons, that the services were worth more than this sum, could not be considered. I have no doubt that this decision is good law in other States than New York, and it certainly is good sense.

The present cold snap will no doubt cause many accidents from slipping on the ice and snow, and the sufferers will certainly be anxious to sue some one and recover damages for their pain and grief. Most persons, in such circumstances, decide to sue the city or town authorities, rather than the owners of the properties in front of which the accidents occur. These suits are brought on the theory that the city or town is responsible for the care of the streets, and must keep them in a passable condition or suffer the consequences. The Courts recognize and enforce this general rule, and, as a result, there are many actions brought and many judgments secured. There is a limit, however, to the responsibility for sidewalk accidents, and the city cannot be made to pay for every slip and fall. In a recent case the limitations are thus stated: "The duty resting upon municipal corporations to remove accumulations of ice and snow as it falls from time to time upon their streets is a qualified one, and becomes imperative only when dangerous formations or obstacles have been created, and notice of their existence has been received by the corporation. Actual notice to the public authorities is not in all cases required, and it has been held that negligence may be inferred from the omission by the corporation to cause dangerous obstructions to be removed from the streets, after sufficient time has elapsed to afford a

presumption of knowledge of their existence and an opportunity to effect their removal."

In a late criminal case in Kentucky, the Court was called upon to decide whether oral evidence could be introduced to prove the contents of a written statement made by the injured man when in expectation of death. The accused person had in some way destroyed or concealed the written statement, and it was held that in such a case oral evidence was perfectly proper. The Courts are, however, careful to require the best evidence to be produced, and this, in ordinary circumstances, would be the original statement and not a copy or any recollection of its contents.

The rules governing expert evidence are quite strict, and physicians are not allowed to give their opinions, except upon statements of facts which are clearly given and cannot well be misunderstood. In a late New York case, it was held that an expert could not be asked whether, in his judgment, "based on all the testimony" and "on the whole case," a criminal was sane or insane, as the jury would not be able to tell upon what facts the witness based his opinion. The proper course is for the counsel to frame hypothetical questions stating exactly certain facts, assumed to be proved, and then to ask the witness his opinion, based on such facts. An expert witness cannot be asked his opinion, founded on what he has heard other witnesses testify.

Veterinary surgeons are held liable to the same requirements of care and knowledge that members of the medical profession are subject to. A recent suit in Nebraska brings out clearly the law bearing on such cases. The Court said: "A veterinary surgeon impliedly engages and is bound to use, in the performance of his duties in his employment, such reasonable skill, diligence and attention as may be ordinarily expected of persons in that profession. He does not contract to use the highest degree of skill, nor an extraordinary amount of diligence, but to exercise a reasonable degree of knowledge, diligence and attention."

The Iowa Code seems to open a possible opportunity for injustice to insane persons by not requiring their presence at examinations into their mental condition. A recent case states that if the Commissioners of Lunacy, after preliminary inquiries as to the condition of one sought to be adjudged insane, shall be of the opinion that his presence, during the investigation, would be injurious to him or without advantage, they may dispense therewith.

There does not seem to be any requirement of a personal notice that the examination is to be held, and it would appear that a person can be declared insane, who does not know that any proceedings are on foot for such a purpose.

PERISCOPE

Koch's Remedy.

The *Johns Hopkins Hospital Bulletin*, January, 1891, contains a very discreet report by Dr. A. C. Abbott of the impressions made upon his mind by a visit to Berlin, to investigate the use of Koch's remedy for tuberculosis. In this report, Dr. Abbott says: I shall not attempt to give in detail an account of the cases which were seen by me but shall present the general conclusions at which I arrived. Judging from the cases which I had the opportunity of seeing, I feel justified in concluding that the outlook for those coming under the head of "surgical tuberculosis" is a very favorable one. In the lupus cases particularly, one may say that up to date cure has certainly been effected in a fair number. These cases, as was pointed out by Koch, present altogether the favorable material for the observation of both the systemic and local reactions following the injections and, as a rule, respond in an astonishingly rapid manner to the treatment.

In the group of surgical cases coming under the head of "joint tuberculosis" the injections of the virus have not rarely been continued until the systemic reaction practically ceased to appear even though large doses may have been reached, and still the local expression may have improved but slightly or not at all. In one such case that I call to mind the joint cavity was subsequently opened and it was found a mass of necrotic tissue containing tubercle bacilli. This tissue was lying free in the cavity and had been thrown off from a point on the wall of the joint which still presented the characteristics of tuberculous tissue.

In a second case which I saw demonstrated there was every reason for believing that the condition was identical with that of the joint to which I have just referred.

At operation, however, there was a conspicuous absence of anything in the joint that would lead one to suspect the presence of offending necrotic tissue. At the point, however, on the cartilage was an old scar, evidently of tubercular origin, and it is not improbable that the irritation of and effusion into the joint may have resulted from the local reaction in this bit of scar tissue; a reaction analogous to that seen in the scar tissue of the skin which remains after surgical operations for the removal of underlying tuberculous processes.

In the joint troubles of this character the best results which may be expected will be those arising from the action of the virus, combined with the treatment of the joint by the ordinary surgical measures.

It is as yet impossible to say what the result of the treatment in the pulmonary manifestations of the disease will be. Evidence in this department accumulates so very slowly that one is hardly justified in speaking confidently as to the results.

The employment of the agent in laryngeal cases of tuberculous nature should be conducted with the greatest care, and the treatment should begin with even a smaller quantity of the agent than that ordinarily employed as the minimum dose for other troubles. The conjestion brought about in the tissues of this organ as a result of the treatment may plainly be seen to be of a dangerous, if not a of fatal, nature.

As is well known, Koch has said positively that phthisical patients in whom the disease is but only slightly advanced can be cured by the systematic employment of the virus. In his experience this class of patients were in a number of instances pronounced as cured after from four to six weeks. He claims further that a patient in whose lungs cavities of limited extent exist may be very much improved, and indeed almost cured by this method.

It has not been my province as yet to see any of the cases which have been reported as cured, though I have seen a number in which the tubercle bacilli were said to have disappeared for longer or shorter periods of time from the sputum of the patients.

From my personal experience in the wards in which the pulmonary cases were being treated, I feel constrained to say that, in my opinion, it is only with the greatest conservatism that one should express an opinion as to the result of the treatment. There is no doubt that many of these patients gave evidence of improvement, but for one to say positively that they were cured would, I believe be, at present, a little premature.

In concluding his report, Dr. Abbott expresses the opinion that the outlook in surgical cases of tubercular nature is good, particularly in those most superficially located; that, in the lung cases, the outlook appears to be fair if the cases are treated sufficiently early. For advanced cases he thinks it would be premature to do more than speculate, in view of the existing evidence. The intestinal cases, so far as they have as yet been observed, he thinks are unpromising.

New Remedies for Whooping-cough.

In the *Deutsche med. Wochenschrift*, January 19, 1891, Boas gives an interesting review of some new remedies for whooping-cough. Antipyrin was first used by Genser, who reported his experiences with 120 cases. The average duration of the disease was twenty-four days, as compared with the usual sixty to ninety days. Genser gave, as a dose, one and a half grains for each year of the child's age. Sonnenberger reported upon 70 cases. To young children he gave doses of from half of a grain to one and one-half grains three times a day; to older children, from two and a half grains to fifteen grains. He observed marked lessening of the severity of the attacks and shortening of the duration of the disease. Antipyrin is by no means always harmless, it appears, and there are a number of cases of poisoning from its use. Rothe, who has observed unfavorable results from the employment of antipyrin, uses a combination of tincture of iodine and carbolic acid, and proclaims its great advantages. Of a hundred cases upon this treatment he could recollect none in which the disease lasted longer than four weeks. He makes use of the following solution:

R	Acidi carbol.	gr. iss
	Alcoholis	♏iss
	Tinct. iodi	gtt x
	Tinct. belladonnæ	gtt xxx
	Aq. menth	f ℥ii
	Syr. opiat[1]	♏xv

M. To children over two years of age, a teaspoonful every two hours.

Antifebrin has also had advocates. The

[1] Contains, according to Ewald, only about 1 ½ hundredths of a grain of extract of opium.

dose is from one-half to four and a half grains, three times a day, according to the age of the child.

Heiman employed phenacetin in a case in which antipyrin had failed, and the result was so surprising that he employed it in two other cases. It diminished the number of the attacks from fifteen to three, and for a day at a time they ceased entirely, but returned at night if phenacetin was not given. The dose for a child three years old was one and a half grains three times a day.

Moncoroo, in 1885, was the first to recommend resorcin locally in whooping-cough. His results have been confirmed by others.

The fumes of sulphur have been recommended by Manby and Weissberger. The latter speaks enthusiastically of the remedy. He burns morning and evening one hundred and fifty grains of sulphur and exposes the child for an hour to the vapor. The gas generated is not concentrated enough to more than provoke a slight irritation of the throat and nasal mucous membrane.

Stepp recommends bromoform, which is given in drop doses in water. A child three to four weeks old receives one drop three or four times a day, older children in proportion. One hundred cases are reported and no disagreeable symptoms have been observed. Recovery resulted in from two to four weeks. Care is required on account of the volatility of the bromoform, because it is easily decomposed. It should be kept in dark bottles. Löwenthal confirms Stepp's statements, and also reports one hundred cases. The highest quantity taken (during the course of the disease) was five drachms, the lowest seventy-five minims; the separate doses were the same as those employed by Stepp. In a few cases Löwenthal observed weariness and sleepiness after giving the drug, and in one case, probably on account of too large a dose being given, poisoning occurred, but it was quickly overcome by stimulants.

Neumann reports that the bromoform has a favorable influence, but it does not shorten the attacks decidedly. Louis Fischer's experience with it has also been very favorable.

Schilling has experimented with chloroform water in the form of inhalations: a teaspoonful of warm water is put into the receptacle of the inhalation apparatus and chloroform added in drops according to the age of the patient. The sitting is ended as soon as the water, converted into steam by heat, has been used up. Four sittings are given a day. These inhalations act favorably upon the attacks and upon the duration of the disease. Sixty-two cases are reported.

Manasse recommends, upon an experience with forty-one cases, terpin hydrate, which is administered according to the following formula:

℞ Terpin hydrat. . . . . gr. viiss–xv
In. pulv. No x.
Sig. One powder three times a day.

Improvement is said to occur with certainty in four or five days. Manasse reports a favorable influence especially upon the bronchitis which is nearly always present. Digestion is in no way influenced by terpin hydrate, and it has no systemic action. Telamon recommends terpin hydrate with antipyrin:

Terpin hydrat. . . . . gr. xv–xxiii
Antipyrin . . . . . gr. xv
Syrupi aurantii cort. . . . . f℥iss
Aq. Liliæ (Linden) . . . . . f℥ij
M. Sig. One to two coffeespoonfuls several times a day for a child from one to four years old.

A very new remedy is ouabaïne, an alkaloid obtained from a root used by the Somalis as an arrow poison. It is recommended in whooping-cough by Gammel. One-twentieth of a milligram is the dose. The results obtained by its use thus far have not been brilliant.

A Failure with Koch's Remedy.

The *New York Medical Journal*, February 14, says: A significant case was reported at the last meeting of the New York Pathological Society, on Wednesday evening, that seems to us to go far to exemplify the force of the cautions inculcated by Virchow's observations, subsequently re-enforced by Henoch's, as to the possibility of spreading or intensifying a moderate tubercular invasion by the employment of the Koch treatment. The case was that of a man presenting the rational and physical signs of pulmonary tuberculosis, but in whom no pulmonary cavity could be detected. After he had been given twenty-four injections of Koch's liquid, in the usual doses and at the usual intervals, the number of bacili in the sputum was found to have increased, and the patient's condition was decidedly worse. A cavity was detected in the apex of the lung, and the patient died shortly after the discontinuance of the Koch treatment. After death, the cavity was found in the lung, about as large as a lemon, and there was

miliary tuberculous disease of the lungs. The tuberculous foci were surrounded by intense congestion, and the meninges of the brain and various organs were also highly congested. The opinion was expressed that at the outset the case was eminently a proper one for testing the efficacy of the Koch treatment.

Cremation and its Safeguards.

The *Lancet*, January 31, 1891, says: Unfortunate circumstances connected with the death of the late Duke of Bedford have brought into prominence an important question respecting the procedure of the Cremation Society, of which the late Duke was a prominent member, in cases of death from other than purely natural causes. It is clear that in the case of the Society absolute certainty as to the cause of death when other than natural can alone justify the preferential application of its method. It will therefore be interesting to examine the practical value of the safeguards adopted by the Society to prevent the chances of fallacy in a matter so important. These are three—namely: (1) the certificate of the medical practitioner in attendance on the deceased during his last illness; (2) a second independent certificate by another practitioner after careful inquiry into the circumstances attending the illness; and (3), should any doubt remain, the evidence afforded by necropsy. A further, though possibly less permanent, security exists in the resolution of the Society to refuse cremation in any case where the least doubt exists respecting the cause of death. Such doubt, as observed by Sir Henry Thompson, could remain after necropsy only in an extremely small number of cases, and would, in fact, be virtually abolished. Not actually so, however. There still remains a minimum uncertainty, and this, it is apparent, is much greater where certification even on the very careful system employed by the Society, is alone relied upon. The practitioner in attendance might, in spite of diligence and skill, be misled---for example, in a case where the signs of poison were obscurely blended with those of real or supposed disease. In this connection the case of the late Mr. Maybrick is suggestive. Is it then to be believed that a second medical testimony, which would be independent of the former, could be relied on to guarantee the difference of opinion which would necessitate an appeal to the coroner? We should rather expect that this latter evidence, divested as it must be of various technical premises which guided the statements in the first certificate, would be at best a carefully weighed and usually confirmatory assertion of moral certainty. After all it is probable that the most reliable safeguard against a too precipitate practice of cremation which we possess is to be found in the resolutions of the Society above mentioned. Cremation therefore under its present rules is certainly a valuable means of promoting accuracy in certification. As affording an absolute guarantee of such accuracy it cannot be depended on, while it must in all cases destroy every trace of morbid or mischievous agency contained in the tissues. While therefore we freely admit its practical security against any miscarriage of justice in the vast majority of cases, we cannot admit that it stands in this respect on a level exactly so high as the practice of burial. Moreover, while we also recognize its more absolute and destructive purity in the disposal of infectious dead, we do not see that it possesses any such advantage in comparison with burial in other cases, provided that burial be conducted, as it increasingly is conducted, on a rational or "earth to earth" system.

Treatment of Tuberculous Abscesses with Hot Water Flushing.

Mr. Arthur E. Barker, Surgeon to University College Hospital, says, in the *British Medical Journal*, February 7, 1891: Hitherto the usual treatment of large tuberculous abscesses, whether connected with a diseased spine, with broken-down glands, or in the soft parts, has left much to be desired. Whether they were simply allowed to burst, or were opened and dressed antiseptically, or whether they were aspirated with or without subsequent injection of germicidal fluids, the results have often been far from satisfactory. Either the discharge, however sweet, has gone on for an indefinite time through open sinuses, or the abscess has become infected with saprophytic organisms, and only too often with acute septic processes.

Having had considerable experience in the removal of tuberculous material from widely diseased hip-joints with hot water flushings applied in a special way, and hav-

ing seen case after case heal completely and permanently without any drainage, under one dressing, after such treatment, I have been encouraged to apply the same method to large tuberculous abscesses elsewhere. The results have exceeded expectation, and have encouraged to further trial.

The *modus operandi* is simply this: Take the case of a psoas abscess, in which the bone lesion is apparently stationary, or perhaps healing, but where a large collection is steadily, though slowly, advanced towards the skin of the thigh. In such a case a two-inch incision is made through sound structures over the lower end of the swelling. Through this opening a hollow gouge is inserted, which is connected with a reservoir of hot water at 105° to 110° F. by a rubber tube some 6 feet long. This reservoir (a 3-gallon can) is raised about 5 feet above the operating table. When the water is now turned on it rushes through the long gouge to the fundus of the abscess with considerable force, and the reflux carries the contents of the cavity out by the incision. By gently scraping with the flushing scoop the more solid caseous matter is dislodged, the hot water carrying it clear out of the cavity at once. Then the walls of the cavity are gently scraped in a methodical manner until the soft lining is loosened and carried away from every part of the abscess. In order to effect this thoroughly I have had these scoops made of varying length, so that the deeper parts can be reached. In the case of a psoas abscess they can be carried up under Poupart's ligament nearly, if not actually, to the spine. In using them all violence must be avoided, lest important structures should be torn, or lest the fibrous wall of the abscess should be broken through, and, finally, to avoid bleeding. With hot water the bleeding is but slight if the peeling be done cautiously.

When the water runs out clear after having been carried to all recesses of the cavity, the instument is withdrawn. Then any excess of water is squeezed out, and if the deeper parts are accessible, sponges are used to dry out the last traces of moisture. Then two or three ounces of fresh iodoform emulsion are poured into the deepest part of the abscess, and stitches are inserted in the edges of the incision. Before these are knotted all excess of emulsion should be squeezed out of the cavity. The knotting of the silk sutures then completes the procedure. As no drain tube is used at all, a simple dry dressing of salicylic wool is alone required, but it should be laid on in considerable quantity, so as to exert elastic pressure over the whole area of the abscess when bandaged. Such a dressing may be left on for about ten days, when it is time to remove the stitches, and the wound should then be firmly healed. A piece of salicylic wool secured by collodion at the edges should, however, be laid over it to keep it from chafing for a few days longer, and the elastic pressure should also be kept up.

Such a procedure is only demanded for the larger tuberculous collections, such as, for instance, psoas, iliac and lumbar abscesses. Of course, for those that can be fairly isolated, no treatment is better than to dissect them cleanly out without rupturing them—a practice I am very partial to. This can be done in perhaps a much larger proportion of cases than is commonly supposed, even when the contents are fluid. Again, in the case of softening tuberculous glands, it is the proper thing to dissect round them and remove them entire, and wounds thus made ought to heal by first intention and without drainage. Some of the larger abscesses, such as those alluded to above, may also ultimately be cured by aspiration of their contents and injection of iodoform emulsion. But in my own experience of many such cases this requires considerable time, is uncertain, and is only to be achieved when the contents are very fluid. Where there is much solid matter which will not pass through the needle, I know no method so reliable and so speedy as that of mechanical hot water flushing. I have always called this "flushing," as it is something totally different to mere irrigation, which does not carry away the material one is anxious to have removed.

Massage as a Cause of Pyemia.

In the *Vratch*, No. 21, 1890, p. 474, Dr. Petr S. Novitzky, house-surgeon to the Kazan Military Hospital, records a very instructive case which proves that massage of a suppurating gland can easily give rise to the so-called "multiple or metastatic pyemia." A shopkeeper fell ill with suppurative inflammation of his right parotid gland. On the sixth day of the disease, he energetically rubbed into the fluctuating tumor some gray mercurial ointment. In a few minutes there appeared severe rigors, while the swelling markedly decreased in bulk. In the course of two days there developed

several abscesses (varying in size from a nut to a pigeon's egg) on the right side of the scalp and neck and in the right submaxillary region. On the fourth day (after the rubbing in), the left major pectoral muscle became inflamed. On the tenth, a large abscess on the right calf made its appearance. On the seventeenth, the right lung was found affected. On the twentieth, the patient died of exhaustion. According to Dr. Novitzky's theory, the energetic manipulations, made by the man on rubbing in the salve, had driven pus from the parotid abscess into the adjacent lymphatic and blood-vessels. Pointing to his case, the author earnestly warns against practicing local massage in cases of suppurative parotitis or mastitis (which method has been recently recommended by Dr. Zemblinoff, of Usman, in the *Vratch*, Nos. 3 and 7, p. 61).

New Remedies for Ear Diseases.

Dr. Edmund Szenes, an otologist of Buda-Pesth, lectured before the Imperial Society of Physicians at Buda-Pesth, June 14, 1890, upon the therapeutic value of some new remedies introduced into the practice of ear diseases, and Dr. Patrzek makes a report upon this lecture in the *Allgemeine med. Central-Zeitung*, January 3, 1891.

Menthol, according to Szenes, has proved of value in the treatment of furuncles of the auditory canal. A twenty per cent. solution of it is used, and a pledget of cotton wet with it is placed in the canal. A twenty per cent. solution of aceto-tartrate of aluminium is likewise of good service. In using it, patients are directed to fill the auditory canal every three hours with a warmed solution, and to keep it in the ear for some minutes. Kirchner has recommended the following solution for furuncles:

℞ Corrosive sublimate . . . . . gr. ¾
Water . . . . . f℥i
Glycerine . . . . . f℥v

He alludes to staphylococci detected by him in the secretion of the furuncle. Szenes says the sublimate acts best after incision or spontaneous opening of the furuncle. Szenes has also employed acetate of aluminium, which is much prized as a remedy in furnuculosis of the auditory canal. It is diluted four times with water. It allays the pain but does not shorten the course of the disease process. During the last epidemic of influenza, in the first stage of acute inflammation of the tympanum, a fifteen per cent. solution of carbolic acid in glycerine did good service. Szenes is not enthusiastic over creolin; all antiseptic fluids which are not clear should be banished from ear practice. Iodol, which has been recommended in place of iodoform, accomplished no results in otorrhœa, notwithstanding its daily use for several weeks; and salicylate of bismuth and aristol were of as little service.

Szenes has the following to say about the much-used treatment with powdered boric acid: "When the perforation in the drum membrane is sufficiently large, and occupies a convenient position; when there is no caries of the ossicles, or of the tympanic wall; when, moreover, no affection of the mastoid exists, and when, therefore, no retention of pus and its effects are to be feared, then, after proper cleansing and drying of the tympanum, a little boric acid can be blown into the deeper parts of the external auditory canal."

Lactic acid, even in weak solution, causes pain and erosions, so that soon it has to be given up. Cocaine, recommended by Kieselbach, for tinnitus, has in no case proved effective. At the Prague ear clinic of Prof. Zaufal, Szenes saw massage employed, and he praises its effect in diminishing pain and promoting absorption. The hand is anointed with iodine ointment and the mastoid and the region behind the ante-tragus is stroked downwards, on the side of the neck, and as far as the clavicle.

Lupus and the Koch Fluid.

After brief references to the enthusiasm which the first announcements of Koch as to his remedy for tuberculosis aroused and to the reaction which has set in, accelerated by the reports of Virchow, Dr. Hermann Isaac, of Berlin, in the *Deutsche Medizinal Zeitung*, January 19, 1891, discusses the utility of the remedy in the treatment of lupus. While in the case of tuberculosis of internal organs, the most cautious dosage and careful observations cannot obviate occasional untoward results, experience teaches that the remedy exerts its specific curative influence especially in tuberculous processes of exposed surfaces. In the case of lupus no obstacle is interposed to the extrusion of the structures cast off as a result of the action of the injection of the Koch fluid. An important

consideration in the treatment of lupus in this way lies in the fact that the patients are usually otherwise robust and healthy. So striking is this that there are yet distinguished dermatologists who do not admit the identity of lupus and tuberculosis. Isaac, however, considers the reaction with the Koch fluid to decide the tuberculous nature of lupus.

Dr. Isaac observes the precaution to make the initial injection one milligram (.001). A boy of thirteen, with lupus of the left cheek, reacted typically to a half a milligram (.0005). An elderly woman with lupus of the upper lip of forty years' standing was much improved after having received ten injections. At the same time she was relieved of distressing dyspnœa arising from emphysema. Marked general reaction occurred in a case of lupus erythematodos after the injection of eight milligrams (.008). No local reaction was apparent, although the efflorescences receded after repeated injections. Two other cases of lupus reacted locally to one milligram (.001) of fluid, while the general condition was but little affected. In doubtful cases, involving the diagnosis of lupus from carcinoma, syphilis and some forms of eczema, Dr. Isaac thinks the remedy is invaluable.

Internal Lavage.

A few years ago, perhaps based on the fact of the deficiency of chlorides in the urine in pneumonia, it was proposed to treat this disease by subcutaneous injections of large quantities of water containing, in solution, sufficient common salt to approximate the specific gravity of the fluid to that of the serum of the blood. It was found that these injections were well borne, to say the least, and a number of the cases thus treated recovered. Now, M. Sahli, of Berne, in the *Bulletin Médical*, January 25, 1891, proposes to apply the procedure, which he calls "internal lavage," to the treatment of certain morbid states, such as typhoid fever and uremia, in which auto-infection plays a prominent rôle. The theory is that the tissues are flushed by the fluid, which carries off the noxious agents through the kidneys.

The apparatus for this method of treatment consists in a reservoir to contain a sterilized saline solution, a rubber tube, and a large, hollow aspirating needle. The needle is introduced into the subcutaneous connective tissue of the thigh or buttock, and the fluid is placed at a height sufficient to obtain the desired degree of pressure. M. Sahli injects a pint of the solution every day, or even twice a day. Often copious diuresis results. In some cases the fluid is taken up and retained by the tissues deprived of their normal fluids by the disease process.

Copaiba Balsam as a Diuretic.

In the *Meditzinskoïe Obozrçniïe*, Nos. 13 and 14, 1890, p. 73, Professor Ivan N. Obolensky, of Kharkov, warmly recommends copaiba balsam as a powerful diuretic eminently suitable for dispelling dropsies of cardiac origin. Having tried this old-fashioned remedy (in the daily dose of from 20 to 40 grains, in emulsion), in nine cases, the author has found that, 1. As a diuretic agent, copaiba is by far superior to digitalis, convallaria, adonis vernalis, stigmata maïdis and calomel. 2. It acts very quickly, an abundant diuresis being equally established about the end of the first 24 hours. 3. The effects are stable and long-lasting, the patient's organism showing no tendency to habituation towards the remedy (the same dose producing the same diuretic effects for weeks). 4. Of disagreeable concomitant effects, there are occasionally observed heartburn with eructations, increased frequency of micturition, abdominal pain with liquid stools, and admixture of red blood-corpuscles to the urine. 5. Such phenomena, however, are always mild, no necessity arising to discontinue the administration of the remedy. 6. The balsam does not exercise any influence on the cardiac action, or pulse, or arterial tension. 7. Its diuretic action appears to depend upon its directly stimulating the renal secretory nerves.

Treatment of Hemeralopia with Injections of Antipyrin.

Hemeralopia is a condition in which vision is impaired so that it becomes imperfect when the light is not strong. Instillations of pilocarpine or eserine have been used in its treatment. The *Wiener medizinische Presse*, January 4, 1891, quotes three cases reported by Grandelément in *Lyon méd.*, No. 50, 1890, in which good results were obtained by the subcutaneous injection of antipyrin on alternate days, for a long period.

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HEMATURIA IN TYPHOID FEVER.

Hematuria, or the passage of bloody urine, may arise from disease or from traumatism of the kidney, ureter, bladder or urethra. When from the kidney and ureter, the blood is usually intimately mixed with the urine; when from the bladder, the first urine passed is usually clearer than the last, and clotting is more common than in the case of hemorrhage from the kidney. When the blood comes from the urethra, it is possible, by passing a catheter into the bladder, to obtain clear urine. These statements regarding the characteristics of hemorrhage from the different urinary organs must, of course, be accepted as general truths only; exceptions are not infrequent.

A very rare cause of extra-renal hematuria is typhoid fever, and to it A. Létienne directs attention in a communication published in *La Médecine Moderne*, December 18, 1890. It appears from this paper that Chomel, Andral and Louis carefully noted in their autopsies on cases of typhoid fever the condition of the bladder. Subsequently J. Cossy, in 1843, collected their observations and published them, adding eight of his own. Following Cossy, Lecorché, Homolle, Murchison and Griesinger have all mentioned the condition and dwelt upon it with more or less detail.

The hematuria occurs frequently without premonitory symptoms, and without pain. In the cases observed by Létienne in the service of Lecorché, the blood was uncoagulated, and imperfectly mixed with the urine; the blood corpuscles were rapidly precipitated to the bottom of the vessel. There were no clots, or only small ones, indicating that there had been no notable extravasation in the bladder. The hematuria may not occur with each micturition; it may occur once, then disappear, to recur several days later, or it may be continuous. The quantity of blood varies in different cases.

Hematuria usually appears late in typhoid fever, though it may occur at the onset of the disease, as in a case reported by Lecorché. It has no such effect in reducing temperature as intestinal hemorrhage has; on the contrary, it may be followed by an elevation of temperature, for the lesion which causes it may permit of the re-absorption of septic products.

The prognosis of cases of typhoid fever in which hematuria occurs is generally graver, as the passage of blood indicates the wide dissemination of the infectious agent and a lessened resistance on the part of the patient. But, of course, if it constitutes the only anomalous symptom in a patient otherwise doing very well, it becomes of no importance. The lesions which provoke the hemorrhage appear in the form of ecchymoses, of nipple-like prominences, discrete or grouped ulcerations, and of gangrenous spots on the mucous membrane.

Hematuria occurring in typhoid fever is

admittedly rare, and some may think it not worthy of serious consideration. It sometimes happens, however, that the cause of a rare condition affords an explanation of some other condition not so rare and more important. It is well known that palsy follows many of the acute infectious diseases especially the exanthemata. Many cases are on record in which palsy has occurred during convalescence from typhoid fever, scarlatina and measles, not to mention diphtheria. The cause of these palsies has not been very satisfactorily determined. Doubtless hemorrhage occurs in a number of cases, the specific poison so acting upon the vessel walls that the blood can escape. This explanation is borne out and strengthened by the lesions just described as occurring in typhoid fever in the bladder, where they are so gross as to be capable of demonstration; whereas in the brain or cord they could be suspected only, since autopsies upon persons suffering with such palsies are rare and have been performed for the most part only after the palsy has lasted a long time and, consequently, the possibility of detecting the primary lesion very slight.

MATERNAL IMPRESSIONS.

The influence of maternal impressions upon the fetus in utero is a matter not only of scientific interest, but also of certain practical value. From the time of Hippocrates it has been held by the medical profession that psychical or physical impressions made upon the pregnant woman gave rise to marks, deformities and malformations evident in the child at birth. Such a view is also firmly implanted in the popular mind, as perpetuated in the term "mothers' marks." The problem is one difficult of solution. Though it may not be possible to explain the occurrence of abnormalities in the fetus as a result of influences acting upon the mother during pregnancy, the first step in that direction would be the collection and careful analysis of a large number of records of cases, so as to determine whether the association be merely accidental or coincident or related as cause and effect.

The *Edinburgh Medical Journal*, for January, 1891, contains an address read by Dr. J. W. Ballantyne before the Edinburgh Obstetrical Society, in which he reviews the subject of maternal impressions, and reports four cases. In one, a woman having an aversion to frogs was terrified early in her first pregnancy by a dead frog thrown at her by a friend. At term she gave birth to an anencephalic child. Becoming pregnant a second time she was again delivered of an anencephalic infant. The significance of this case is lessened by the fact that the father, by a first wife, had a hydrocephalic child. In the second case, a woman who was struck, during the third month of pregnancy, by a deaf-and-dumb peddler, gave birth to a child which at the age of three was yet deaf and dumb. In the third case, a mother gave birth to a child minus three fingers of the left hand. During her pregnancy, she had been alarmed by a wood-chopper falling heavily on the same three fingers of the left hand of another child. In the fourth case, one son resembled physically, mentally and personally a maternal uncle, while a second resembled the maternal grandmother. In each instance, the relative in question had been a source of anxiety during the respective pregnancy.

Dr. Parvin, in the second edition of his work on *Obstetrics*, also gives four cases of maternal impressions. To arrive at some definite conclusions upon this subject, it is recommended that the following points be inquired into: The period in pregnancy at which the impression was made; the character of the impression; the channels through which the impression was received; the mother was conscious of the impression and anticipated a defect in the child; the duration of the impression; the influence of heredity.

The practical deductions to be drawn

from this subject, independently of its explanation, are that during pregnancy a woman should lead a life of tranquillity, avoiding excitement, relieved of anxiety, spared depressing emotions and provided against deprivation and want.

DUST AND TUBERCLE BACILLI.

The question of the dissemination of tuberculosis is so interesting and important that we may call attention to an observation in this direction by Dr. M. T. Schnirer, of Vienna, recorded in the *Wiener Medizinische Presse*, January 4, 1891. One day in 1888, on rinsing the dust from some grapes, bought on a warm day, late in the summer, he found the water afterwards quite dirty. Struck by the thought of the large number of phthisical patients who eject their sputa upon the streets, he injected ten cubic centimeters of this water into the abdominal cavity of each of three guinea-pigs. One of the animals died in two days of peritonitis. The other two died in forty-five and fifty-eight days respectively. Examination of the bodies disclosed exquisite tuberculosis, originating at the site of inoculation, and partially caseous nodules in the peritoneum, in the liver, in the spleen, with but meagre deposits in the lungs. Tubercle bacilli were found in the nodules. Dr. Schnirer concludes that the conveyance was by means of the dust, as the water used was the pure spring water of Vienna, and the glass receptacle containing the water, the doctor's hands and the syringe with which the injection was made had been previously sterilized. He assumes, though without direct evidence, that the vender from whom the fruit was obtained was healthy.

The point Dr. Schnirer makes is, that tubercle bacilli may be in the dust of public streets, and may be attached to fruit or other articles exposed for sale and afterwards used for food.

This fear seems to be exaggerated and contrary to the inferences deducible from Cornet's investigations; for Cornet failed to find bacilli in street dust. Still, the observation of Schnirer is an interesting one, and its true significance may be estimated when taken in connection with facts continually accumulating. The experience of Schnirer may be open to inferences very different from those which he draws; but in any case, it is interesting to record and worth remembering in studying the important subject of tuberculosis.

DEATHS IN COLD WEATHER.

The recent cold weather in Europe serves to strongly illustrate the inability of the aged to withstand exposure. A recent number of the *London News* states that in the second week of December, 1890, the number of deaths among persons eighty years old reached 100, while during the following three weeks, which were so unprecedentedly cold, the number increased to 116, 142, 148. In persons afflicted with diseases of the throat and chest, the average was doubled.

While the fact that such severe weather is unusual there, and that people were not prepared to meet its rigors, accounts in a degree for the high rate of mortality, reference to the returns of our Philadelphia Board of Health shows that the rate here, where cold weather is not unusual, is decidedly higher in the colder months (in the months of January, February and March) than in the warmer months.

It is of the utmost importance that aged people expose themselves as little as possible during extremely cold or inclement weather, and when necessity compels them to do so, that they be well protected. No doubt if the increased dangers were sufficiently insisted on, in spite of the difficulty of making the average octogenarian realize that he is no longer young, the lives of many aged people would be greatly prolonged.

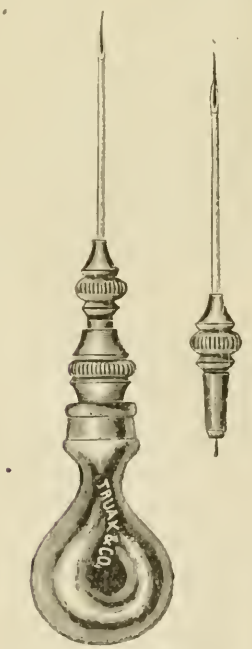
CORRESPONDENCE.

Aseptic Hypodermic Syringe.

TO THE EDITOR.

Sir: Will you kindly grant me space enough to add a few words more upon the subject of the aseptic hypodermic syringe devised by me.

In the issue of the REPORTER for December 6, you print a wood-cut of the syringe of Prof. Koch, used in carrying out the treatment of tuberculosis. As you remark, the two instruments are constructed upon essentially the same principles, the exception being that the Koch instrument is much the more complicated of the two, with all that greater complication implies in increased liability to get out of order, greater expense, and difficulty of being kept in a strictly



aseptic condition. The graduated glass cylinder and the stop-cock features of the Koch syringe may have a use as yet unexplained in the carrying out of the Professor's ideas, but they are entirely superfluous in a syringe for all ordinary uses. In the admirable instrument made at my suggestion by Messrs. Chas. Truax & Co., of Chicago, and now for sale by that firm, the needle is connected directly to the bulb without the intervention of a glass cylinder. The directions for use are of the simplest sort. The bulb is pressed flat and the needle is inserted into some water. On releasing the bulb, the latter fills with water in five seconds or less. The water is discharged into a teaspoon, a solution is made of the tablet or powder, and the bulb is again drawn full, this time with the fluid ready for injection.

This system I have had in constant employment for nearly two years, using a roughly improvised instrument, but with never-failing satisfaction. The instrument maker now furnishes so perfect an article that a fair trial of its merits cannot fail quickly to place the bulb syringe well upon the way of superseding the ordinary form of instrument. The Koch instrument may have uses in carrying out the treatment at present associated with his name, but is not suited to ordinary everyday uses, and must be shorn of certain features before it can lay just claim to be an improvement in the direction of greater simplicity and increased efficiency.

Yours truly,
JOHN J. THOMAS, M. D.
Youngstown, Ohio.

Cancrum Oris or Gangrenous Stomatitis.

TO THE EDITOR.

Sir: On looking over the proceedings of the Tri-State—Alabama, Georgia and Tennessee—Medical Association, I noticed a report of a case of cancrum oris, which called to mind a similar case occurring in my practice in October 12, 1886. The patient, a white male, nine years old, lived eight miles in the country. I first saw the patient October 12. I made a diagnosis of typho-malarial fever. The temperature was high, the pulse rapid, the respiration hurried, and the tongue coated. The bowels had not moved for two days. The general condition of the patient, however, was good. I ordered hydrarg. chlor. mitis, gr. x; ipecacuanhæ, gr. ii; to be made into four powders, one to be given every three hours until the bowels were thoroughly moved. On October 13, at 10 A. M., the condition of the patient was much improved; the temperature was 102°, the pulse 110, the respirations 26. I now gave castor oil, and put the patient on quiniæ sulph., two grains every three hours, until ten grains were taken. I learned on the next morning that he had had several bilious actions during the previous night. I continued the quinine

for several days. Meanwhile all the symptoms seemed to have abated; when suddenly word came to me that the boy had grown worse. I saw him on the morning of October 21. His temperature was 104°; his pulse 130; his respirations 30; his bowels tympanitic, and he was very restless and complaining of severe pain in the left jaw. On examination I found a small, circular, red spot on the mucous membrane. I gave anodynes to relieve the intense pain, and used a solution of chlorate of potash locally. The symptoms continually grew worse, when, on October 24, the ulceration had grown to the size of a twenty-five cent coin, and extended through the whole integumentary surface, the lower molars becoming loose and dropping out; and the patient succumbed on October 26.

I report this case on account of its rarity, and to ascertain the possibility of its being cancrum oris, resulting from the fever or in any way the result of the mercury given in the beginning of the case. It is my opinion, and that of another physician whom I had in consultation, that it was a genuine case, otherwise mercurial salivation would necessarily have occurred, which did not obtain in this case.

Yours truly,

H. A. Alexander, M. D.

Birmingham, Ala.

Politics and Pension Examiners.

To the Editor.

Sir: I wish to enter a vigorous protest against the sentiments expressed in an article copied in the Reporter, February 21, 1891, from the *Indiana Medical Journal*, entitled "Politics and Pension Examiners." The article in question was undoubtedly written by some red-hot opponent of the administration, who takes this method of trying to create a prejudice in the minds of some members of our profession who do not take the trouble of posting themselves in regard to the workings of our system of government. The journal casts truth to one side as completely as the opponents of the administration did in the last campaign. No member of any Board of Pension Examiners is appointed by the President of the United States. The Commissioner of Pensions, with the approval of the Secretary of the Interior, makes all appointments of members of Boards of Pension Examiners. The President has nothing to do with these appointments. If Elbert has been appointed on the Board at Indianapolis, it was not the fault of President Harrison, and the author of the article in question should have known this fact before penning such a scandalous attack upon the man who fills the executive chair of this great nation with so much credit to himself and honor to the loyal people of these United States. The *Indiana Medical Journal* disclaims being a "partisan paper," but in the opinion of your correspondent, in this editorial it has descended to the lowest depths of bitter partisanship. It has not even kept within the limits of truth. And the Marion County Medical Society so far forgot its own dignity (if it passed the resolutions quoted) as to lend itself as an instrument to insult the President, and prostituted itself to base "partisan purposes" as completely as any rabid, ultra sore-headed convention of those opposed to the administration could have done. Politics is the Science of Government, and this science is one of the expressions of Truth. President Harrison has never appointed an "incompetent negro" to any position whatever. The Editor of the *Indiana Medical Journal* should stick to medical topics, instead of going into partisan politics, if he wishes to retain the respect of the medical profession outside of his narrow coterie in Indianapolis.

Yours truly,

R. L. Moore, M. D.

Lincoln, Neb.

Notes and Comments.

Benzin as an Antiseptic.

The *Cincinnati Lancet-Clinic*, February 7, 1891, contains an interesting article by Dr. F. W. Langdon on the use of benzin as an antiseptic and parasiticide. Dr. Langdon says:

The substance to which I desire to direct attention in the present communication is the ordinary commercial article, obtained in the distillation of petroleum, and employed in the arts as a cheap solvent of oily matters, paints, etc. Partly deodorized and re-named "rose-oil" it serves for removing grease spots from gloves and textile fabrics. It is known to the chemist as a hydro-carbon of varying constitution, and has, like all such bodies, a marked affinity for oxygen. It is often confounded (in ordinary reading)

with *benzole* or *benzene*, and I have, therefore, exhibited some of the more important contrasts of the two bodies in tabular form:

BENZIN OR BENZINE.	BENZOLE OR BENZENE.
Distilled from petroleum.	Distilled from coal-tar.
A mixture of hydro-carbons of the "marsh-gas series."	A hydro-carbon of the "aromatic series."
Specific gravity, .670-.675.	Specific gravity, .850.
Chemical formulæ: $\begin{cases} C_5 H_{12} \\ C_6 H_{14} \\ C_8 H_{16} \end{cases}$ etc., varying in exact constitution, but within definite limits.	Chemical formula: $C_6 H_4$ Unvarying in constitution.
Commonly used in dissolving oils and pigments, cleaning greasy machinery, textile fabrics, etc.	Used in dissolving gutta-percha, India-rubber, sulphur, phosphorus, iodine, some resins and alkaloids, and by microscopists for dissolving Canada balsam.

I use the above rather simple method of contrast in preference to tables bristling with the hieroglyphic diagrams of atomic constitution with which modern chemistry has familiarized our eyes, if not our understandings. It is the substance described in the first column of the table which forms the subject of the present paper.

Many years since, my attention was attracted to its value as a destroyer of low forms of animal and vegetable life, and when a boy it was my favorable application for the destruction of the larvæ of various parasitic insects (moths and beetles) known as "museum pests," as well as for the removal of molds and other vegetable parasites from bird-skins and insects.

In 1880, during my service as interne at the Cincinnati Hospital, and since then in private practice, it has fallen to my lot to treat a considerable number of cases of the skin disease known as *tinea versicolor*. It was the custom in the hospital to attack the fungus, which is the essential element in the disease, with various parasiticides, of which mercuric chloride was perhaps the favorite. This application (gr. iii to f℥i of water) effected an apparent cure for the time being, by destruction of the fungus on the surface, but invariably there would be a relapse in a few days or weeks—minute brownish spots re-appearing in the immediate vicinity of the hair-follicles and thence spreading and coalescing to form the characteristic pale-brownish patches, varying in size from a fraction of an inch to several inches in area. As it was evident that the relapses were due to the re-growth of spores situated in the depths of the hair follicles, where the watery solutions failed to penetrate, I was led to consider the advisability of using a more penetrating agent, and from my experience elsewhere in its use as a parasiticide, I selected benzin for experimentation.

Selecting a well-marked case, the application was made freely, twice a day, for three days, of a mixture of equal parts of common commercial benzin and tincture of green soap. This was applied by means of a small mop of absorbent cotton. At the same time, as a control experiment, a second case was treated with the bichloride solution. The result was that the growth disappeared in both cases, but the second case experienced the usual relapse within a week or ten days. The benzin mixture being now applied, a permanent cure resulted. I have since discarded the admixture of green soap as superfluous, sometimes diluting the benzin with a little tincture of lavender or other aromatic.

In numerous cases, in private practice, I have found it uniformly successful, not only in this disease, but in the skin diseases of mycotic origin generally, amongst which the ordinary furuncle or "boil" belongs. In the treatment of the latter important, if not dangerous affection, I have found benzin of marked value as an abortive agent, equal, at least, to the subcutaneous injection of carbolic acid, without even the small amount of pain and the slight danger of sloughing, attending the latter method.

The efficacy of benzin in furunculosis is easily demonstrated in that class of cases where one boil is followed, after its rupture, by numerous "seed boils," immediately surrounding its site, or by successive developments of single boils in the same region of the body. Here the prompt disinfection of the affected area, including the depths of the hair follicles, is a most certain method of arresting their progress towards suppuration.

The method of application is very simple. At the first appearance of the little, hard, painful papule, saturate a pledget of absorbent cotton with the remedy and press it firmly, but not forcibly, over the swelling, for about half a minute. Repeat this every hour or two for the first day, after that two or three times a day, as the swelling and pain subside. If suppuration has already taken place, in ever so small an amount, the only remedies, of course, are the knife

or spontaneous evacuation. Even with a small amount of pus in the original boil, its size may be limited and the formation of "seed boils" entirely prevented by the prompt use of the parasiticide. Due care should be taken to avoid the vicinity of a fire or light while making the application. No pain attends the application as above described.

Benzin is also the most useful and effective application for the destruction of the troublesome insects known as "jiggers" or chigoes, which, in many tropical, and some temperate countries, excite much pain and annoyance by burrowing into and laying their eggs in the skin. In the ordinary insect, as it occurs in our Southern States, and even in some parts of Ohio, I have found benzin the best remedy, penetrating their burrows and causing the death of the pests. The troublesome itching and irritation due to its movements are largely abated, though a red indurated area, surrounding its location in the tissue, will remain for some days.

Doubtless the remedy would give equally satisfactory results in scabies, but I have been unable to test it, for lack of clinical material.

I would also suggest its use in trichiniasis, as soon as possible after the ingestion of the infected meat, since a somewhat similar body, benzole (see table of contrasts), has been credited with good results in this disease. As much as two drachms has been given daily (of benzole) for from four to six days. In another recorded case, benzole was taken in quantity "of one or two ounces, probably," without dangerous symptoms. This would seem to indicate that its congener, benzin, in moderate doses, ʒss to ʒi, would be safe, and a remedy worth trying in this fearful and intractable disease.

Finally, the value of benzin as a solvent of oily secretions should not be forgotten in the preparation of skin areas for antiseptic operations. An agent that can penetrate and disinfect the pores and hair-follicles of the region to be operated upon, has advantages not possessed by any of the watery solutions in common use.

To summarize, we have in common commercial benzin an agent which is cheap, unirritating to the skin, not injuring or staining the finest fabrics, convenient of application, and possessing a wide range of usefulness as a parasiticide and anti-mycotic; its action being greatly aided by its solvent power over oily secretions, by reason of which the chief protection of the parasites is removed.

How it acts, I shall not attempt to explain, further than to note that its marked affinity for oxygen may be the key to its *modus operandi* as a parasiticide. Ignored by physicians generally, though found in every drug store at ten cents per gallon, and possessing a chemical ancestry (marsh-gas) identical with that of numerous remedies in common use, *e. g.*, ether, chloroform, iodoform, anilin, antifebrin, antipyrin, rhigolene, carbolic acid, etc., its non-use would seem to furnish another example of the truth of the adage, "Familiarity breeds contempt."

Sublimate Spray for Small-Pox Vesicles.

Dr. Talamon, in an article in the *Gazetta medica Lombarda*, 1890, of which an abstract appears in the *Journal of Cutaneous and Venereal Diseases*, February, 1891, says that, discouraged by the negative results which he had obtained in the treatment of small-pox patients with numerous internal medications which have been recommended and employed successively by a large number of physicians, he confined himself exclusively to the external and local treatment of the pustules. He tried spraying them with tannin, salol, iodoform and sublimate solutions. The use of internal remedies being, up to now, unable to cope with the germ of variola, he thought that by means of local antiseptics he might be capable of acting upon the microbes of suppuration, which cause destruction of the derma, and by a convenient modification of Lister's procedure abort the greater portion of the pustule by keeping its surface under the influence of an antiseptic.

The tannin sprayings were made with a solution containing one gram of tannin to ten grams of a mixture of equal parts of alcohol, ether and water. The tannin forms a varnish which compresses, flattens and drys the pustules, but at the same time it also produces a tension of the face of extreme painfulness, and analogous to that following the application of collodion. The use of a fifty per cent. ethereal solution of salol, sprayed on three or four times a day, calmed the pains, and was agreeable to the patient on account of the agreeable odor of the medicine. It was only found useful in the lighter forms of the disease. Its effects are nearly nothing in the coherent and confluent

forms, where the suppurative inflammation of the derma is more deeply situated. Iodoform as a fifty per cent. ethereal spray and used under the same conditions gave more satisfactory results than the salol, but less so than the use of the sublimate solution, but the disagreeable odor of iodoform rendered its employment offensive to the patient. The sublimate solution was prepared after the following formula:

Corrosive sublimate	1 gm.
Tartaric acid	1 gm.
Alcohol (90 per cent.)	5 c. cm.
Ether to make	50 c. cm.

This was applied as a spray three or four times daily; its use should not be continued too long, for it may produce a painful vesication in the form of long streaks. The individual's susceptibility to the irritant action of sublimate varies very much. In general a spraying of one minute is sufficient in skilled hands; the skin is seen to become whitish in color, which change also extends to the pustule. This coloration is due to a deposit of sublimate, and is the result which the procedure should yield. When, however, the skin is covered by pustules scattered with long interspaces, salol may be employed in order to prevent the action of sublimate upon the points not covered by pustules. Contact with sublimate is well tolerated; patients only complain of a sensation of heat, which is accompanied by a redness of the skin, more or less vivid. The writer has never observed any signs of mercurialism, which seems to indicate that the mercury is not absorbed, but only acts on the superficial layers of the derma. During the procedure it is necessary to take the precaution to protect the eyes by covering them by layers of cotton dipped into a saturated boric-acid solution. The application of the sublimate spray does not completely prevent the formation of pits, but they remarkably diminish in number and depth. It is best to commence on the first day of the eruption, after a vigorous washing of the face with soap, which may be rinsed off with boric acid and dried with absorbent cotton. If one commence on the third day of the eruption the use of soap will then be unnecessary. After the spray has been used the face should be covered with a layer of a fifty per cent. glycerolate of sublimate in order to keep the skin continuously antiseptic and free from outside germs. After the fourth day only two sprayings are necessary, but the glycerolate should be applied the same. At the end of the sixth or on the seventh day the use of the spray may be left off and the glycerolate used alone. As soon as the crusts separate the glycerolate may be substituted for the sublimate-spray, in connection with borated vaselin or salol Dr. Talamon combined, in the coherent, confluent and grave forms of the disease, general sublimate-baths, prolonging their use for three-quarters of an hour to an hour; these, however, did not seem to have any well-marked action on the pustules situated upon the body. Still, those patients who were thus treated seemed to be less subject to the after-complications of convalescence so frequently seen. Finally, the buccal and pharyngeal eruption was treated by borated gargles and lotions.

This medication is absolutely powerless against the most severe forms—that is, the very confluent and hemorrhagic types.

Internally the therapy was limited to sustaining the strength of the patient by means of alcohol in doses of one hundred to two hundred and fifty grams daily, according to the gravity of the case. The quantity of alcohol to be consumed by the patient is increased by addition of water up to one litre; this mixture may be given continuously in broken doses.

Removal of the Gasserian Ganglion.

On Thursday, January 29, Mr. Rose operated for the removal of the Gasserian ganglion in the theatre of King's College Hospital. The patient was a female aged sixty, under the care of Dr. Ferrier, who had suffered for many years from severe neuralgia affecting chiefly the superior maxillary nerve on the right side. Chloroform was given, and after stitching the eyelids together on that side in order to avoid any accidental injury to the eye, a flap of skin was dissected forward, the zygoma was exposed, and, after openings had been drilled with an electro-motor, divided and drawn down with the masseter muscle. The coronoid process of the lower jaw was next drilled and divided in a similar manner, and turned up with the temporal muscle attached. The external pterygoid muscle was then cut through and the foramen ovale reached, into which the pin of a half-inch trephine was inserted, and a disc of bone surrounding it in this way removed. The bleeding was troublesome, and persisted for

some time. The ganglion was seized by some specially constructed hooks, one of which had a cutting edge upon its concave surface; by means of these its attachments were loosened and divided. Bi-chloride of mercury solution (1 in 3,000) was used during the operation. The bones which had been sawn were replaced and secured in position by wire sutures passed through the drill holes previously made, and a drainage-tube inserted. Cyanide gauze dressing was applied. The electric illuminator was found most useful during the deeper dissections. The patient has progressed most satisfactorily since the operation, having had no return of the neuralgic pain, although it is impossible to say at present that the whole of the ganglion was removed. The sutures were removed from the eyelids on the third day; the eye was healthy, but the conjunctiva insensitive. We hope to publish fuller details of this important case later. The operation which was witnessed by a large number of members of the profession and students, occupied about an hour and a half in its performance. We are glad to be able to state that the patient on whom Mr. Rose performed the first operation for the removal of the Gasserian ganglion in April last by a different method continues free from pain and is in good health.—*Lancet*, February 7, 1891.

Impure Drugs.

The *Medical Record*, January 31, 1891, says editorially: The last report of the New York State Board of Health shows that, while the sale of impure drugs is decreasing, it is yet lamentably large. During the year 1889, 807 samples of drugs were bought in the larger towns and cities of the State (excepting New York and Brooklyn) and subjected to analysis. The results are startling. Only 410 samples (50.8 per cent.) were up to the pharmacopœial standard, while 330 of the samples (40.8 per cent.) were totally deficient, by being either falsified, adulterated, decomposed, too strong, or too weak. The remaining 67 samples were of "fair quality." In some details the results of the analysis were as follows: Dilute acetic acid, 40 samples examined; 9 good, 6 fair, 19 inferior, and 6 of excessive strength; this is of unusual importance because of its use in the manufacture of spirits of Mindererus. Dilute nitric acid, 4 samples: 1 good, 3 excessive strength. Dilute sulphuric acid, 53 samples: 9 excessive strength. Hydrobromic acid, 38 samples: 6 inferior and 6 excessive strength. Saffron, 20 samples: 2 good, 1 fair, 17 inferior. Compound spirits of ether (Hoffman's anodyne), 47 samples: 4 good, 4 fair, and 39 inferior. Strong ether, 66 samples: 40 good, 4 fair, and 22 inferior. Precipitated sulphur, 25 samples: 6 good, 2 inferior, 17 inferior. Besides these, inferior samples of oxalate of cerium, chloral and chloroform were found. 115 samples of cream of tartar were bought at grocery stores, and of these only 30 were good preparations, 6 being fair, and 79 "clearly adulterated or falsified." Also there were examined 275 samples of alkaloidal preparations, including sulphate of quinine, citrate of iron and quinine, sulphate of morphine, and tincture of opium. Of these 177 were good, 13 of fair quality only, and 85, or 30 per cent., were "unreasonably deficient."

The object of the work is not so much to determine the proportion of adulterated to pure drugs on the market as to expose actual adulteration, sophistication and carelessness; to inform the public and to caution dealers. Consequently a great variety of drugs was not purchased, and only those were chosen that were likely to be adulterated. But though the frightful showing of the figures above does not represent the actual proportion of impure drugs sold, it shows the deplorable chance to which a physician in prescribing is subjected. One inclined to be facetious might remark, that, what with the difficulty of making a correct diagnosis, the furore and trouble the germs are creating, the chance of getting impure medicine, and the awful weather, it is a wonder that any of our patients live.

The practical value of these analyses comes from the fact that notices are sent to dealers from whom impure drugs are bought, notifying them of the impurities. Rarely does a second notice have to be sent and the standard of preparations is being gradually raised to that of the Pharmacopœia. The law is adequate to its purposes. It simply needs enforcement. After one or two or three warnings the penalties laid down should be applied. In the examination of alkaloidal preparations the bulk of attention was very properly paid to quinine preparations, as the report states that some druggists sell as many as two hundred thousand two-grain pills annually, and that fifty thousand is the estimate made of the

avarage number sold by a druggist doing an ordinary business.

Medical Society of the State of Pennsylvania.

The forty-first annual meeting of the Medical Society of the State of Pennsylvania will be held in Reading, on Tuesday, Wednesday, Thursday and Friday, June 2–5, 1891.

The appointments for 1891 are, 1. Address on Practice of Medicine, Dr. J. Chris. Lange, Pittsburgh: 2. Address on Surgery, Dr. O. H. Allis, Philadelphia; 3. Address on Obstetrics, Dr. J. Milton Duff, Pittsburgh; 4. Address on Mental Disorders, Dr. Samuel Ayres, Pittsburgh; 5. Address on Ophthalmology, Dr. J. A. Lippincott, Pittsburgh; 6. Address on Hygiene, Dr. A. B. Brumbaugh, Huntingdon.

The report of the Committee on the Revision of the Constitution, Dr. W. M. Welch, *Chairman;* and the report of the Committee on Incorporation, Dr. C. W. Dulles, *Chairman,* are to be acted upon.

The Chairman of Committee of Arrangements is Dr. Samuel L. Kurtz, Reading, to whom all applications to read papers at this session should be sent *not later than April 1.*

Secretaries of County Medical Societies are earnestly requested to forward at once complete lists of their officers and members, giving the post-office address of each.

Every delegate, before admission, shall present a certificate of delegation signed by the President or Secretary of his County Society.

Every permanent member (not a delegate), before admission, shall present a certificate of good standing in his County Society.

Railroad facilities will be announced when obtained. All who desire excursion orders should notify the Permanent Secretary, Dr. Wm. B. Atkinson, Philadelphia, stating what railroad must be used.

Warren Triennial Prize.

The Warren Triennial Prize was founded by the late Dr. J. Mason Warren in memory of his father, and his will provides that the accumulated interest of the fund shall be awarded every three years to the best dissertation, considered worthy of a premium, on some subject in physiology, surgery or pathological anatomy, the arbitrators being the physicians and surgeons of the Massachusetts General Hospital. The subject for competition for the year 1892 is On Some Special Subject in Physiology, Surgery or Pathology. Dissertations must be legibly written, and must be suitably bound so as to be easily handled. The name of the writer must be inclosed in a sealed envelope, on which must be written a motto corresponding with one on the accompanying dissertation. Any clew given by the dissertation, or any action on the part of the writer, which reveals his name before the award of the prize, will disqualify him from receiving the same. The amount of the prize for the year 1892 will be $500. In case no dissertation is considered sufficiently meritorious, no award will be made. A high value will be placed on original work.

Prevention of Narcotic Inebriety.

At a meeting of the American Association for the Cure of Inebriety, held Feb. 18, at the Academy of Medicine, New York, Dr. J. B. Mattison, of Brooklyn, offered the following preamble and resolutions:

Whereas, a leading cause of Morphinism, Chloralism and Cocainism is the facility with which morphine, chloral and cocaine can be procured from pharmacists: and,

Whereas, the refilling of prescriptions containing these drugs is a potent factor in the rise and growth of these diseases:

Therefore, be it resolved, as the sense of this Association, that no retail druggist should sell morphine, chloral or cocaine, except on a physician's prescription, and that no prescription containing morphine, chloral or cocaine should be refilled except on the written order of a physician.

These resolutions were unanimously adopted, and a committee consisting of Drs. Mattison, Crothers and Wright was appointed to secure legislation along the line of the resolutions.

Pyoktanin Stains.

Merck's *Bulletin* says that stains with pyoktanin may be removed from the hands by washing with spiritus saponatus, or with a ten per cent. solution of castile soap in alcohol, or with liquor sodæ chlorinatæ. Pyoktanin pencils, when broken, are mended by simply wetting the severed surfaces with water, and pressing them together gently; when dry they will cohere.

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Clinical Lecture.

JAUNDICE FOLLOWING THE PASSAGE OF BILIARY CALCULI.—JAUNDICE FROM ANGEIOCHOLITIS.[1]

BY WILLIAM PEPPER, M. D.,

PROVOST, AND PROFESSOR OF THE THEORY AND PRACTICE OF MEDICINE AND OF CLINICAL MEDICINE IN THE UNIVERSITY OF PENNSYLVANIA.

Gentlemen: In anticipation of the discussion of hepatic disorders, which I shall make in a systematic way within a short time, I shall, to-day, call attention to some clinical illustrations of common affections of the liver.

This man, 60 years of age, was admitted to the hospital, October 28, four days ago. He has always been strong and healthy and temperate in his habits. He had syphilis 20 years ago, but did not have severe constitutional symptoms. For some years, he has had occasional pain in the region of the liver, but not marked enough to greatly inconvenience him. These pains were never followed by jaundice. His present illness began October 14, with severe pain in the pit of the stomach, where it remained fixed and was controlled only by the hypodermic use of morphia. Three days later he was found to be deeply jaundiced. Whether or not the jaundice began before this time cannot be stated. The pain continued for about four days. The bowels were costive at first, but since taking elaterium, they have been loose. There is tenderness in the epigastrium. The urine contained no albumin or casts and on October 31, it was amber clear. It is now more than two weeks since the attack, but yet he is still distinctly jaundiced. As you observe the skin of the entire body is yellow, although not deeply jaundiced. Probably, the best places to determine the existence of jaundice, so far as the skin is concerned, are about the chest, the epigastrium and the palms of the hands.

Let us now determine the cause of the jaundice in this patient, where I hope it may be readily arrived at. It is difficult to say how much importance is to be attached to these vague pains that have been mentioned as occurring more or less for some years. People often complain of pains about this region. They may have been rheumatic, but the last spell of pain was almost certainly dependent upon the passage of gall-stones. It is true that the pain was fixed at the epigastrium and that it did not extend up towards the right shoulder or through to the back, as the pain often does during the passage of gall-stones. It is, however, by no means constant that the pain of gall-stones extends in this way. It may be in the epigastrium, more commonly over the gall-bladder, and it may remain fixed in one place, although it is more common for it to extend upward and through to the back. I have repeatedly seen the pain connected with gall-stones referred to the epigastric region and remain there, as in this case. There is usually tenderness over the gall-bladder and about the position of the gall-duct. This tenderness may last for some time, as in the present case. It is readily explained by the irritation of the gall-ducts due to the passage of a rough or sharp-edged stone through the canal. Here are some specimens of average-sized gall-stones. Even one as small as the smallest of these with sharp edges, would set up inflammation of the gall-duct and account for the tenderness which we find. I call particular attention to this point as it has a bearing upon the diagnosis between gall-stones and simple catarrhal inflammation of the gall-duct. Very often at the time of the passage of the gall-stones there is vomiting.

[1] Delivered at the University Hospital.

But in this case, the man vomited only once and that was on the day following the severe pain. Usually, the bowels are constipated at the time and afterwards, and this is partly the effect of the pain and partly the effect of the sedatives given to relieve the pain, for usually powerful opiates are required, and these, of course, tend to produce constipation. The severe pain may last for an hour, or for several hours, or until it is controlled by an opiate. In fact, the pain may last for several days, as in this case. Immediately after the relief of the pain, jaundice is observed, or where the pain has continued for some time, jaundice may come on while the pain is still present. The pain sometimes stops abruptly, the little stone having forced its way through the duct and slipping into the duodenum; but you must not expect in all cases to find this abrupt ending of the pain. It often gradually subsides, but oftener the way in which it ends is masked by the fact that the patient has had a hypodermic injection of morphia or a suppository of opium or large doses of opium by the mouth, so that the way in which the pain ends is not known.

The jaundice is general. The mucous membranes and the skin are deeply stained. It is associated with the presence of biliary coloring matter in the urine. The movements of the bowels which follow the passage of a gall-stone are very light in color. Sometimes the stoppage is so brief that the bile enters the bowel again and mixes with the feces and there are no clay-colored stools. If the stoppage is longer, the feces will be pale. Often it happens, as in this case, that the patient has no opportunity to observe the character of the stools.

We note, then, as the symptoms of the passage of gall-stones, severe pain in the region of the liver, often extending to the shoulder and accompanied or followed by tenderness on pressure and usually vomiting. The pain comes on abruptly and may end abruptly, but often ends more gradually, or its disappearance is masked by the opiate. Jaundice comes on immediately after the pain, and sometimes while the pain is still present, if this lasts for a day or two. The attack is not attended with fever, but fever may follow as a result of the inflammation of the duct caused by the irritation of the gall-stone. The attack is usually not preceded by evidences of gastro-intestinal catarrh. There has not been a spell of diarrhœa or signs of gastric irritation. Of course, these may exist; but in the majority of cases they will not be found. This point is of importance in the diagnosis between gall-stone and catarrhal hepatitis with spasm. The only way in which the diagnosis of gall-stone can be positively verified is by searching the feces after the attack. The next or the two next stools should be secured, tepid water should be poured upon the fecal mass, which should be stirred with the whisk of a broom and then passed through a sieve, so that if any of these little stones are present they will be found. The failure to find gall-stones is not positive proof that there are none. The stone may have been broken up or disintegrated, or it may have become lodged in some pocket of the colon and not be discharged until some time after the attack. In the majority of cases, however, you will find it in the first or the second stool following the spell. The jaundice will last for a varying length of time according to the duration of the obstruction in the duct. If the stone has been large and has taken a long time to go through, the jaundice may last for ten days. If the stone has been small, the jaundice may pass away in a day or two. It also depends upon the amount of damage to the duct. If the duct is much irritated and inflamed and is swollen, jaundice may continue for several weeks, dependent not upon the gall-stone but upon the destructive inflammation of the gall-duct. This man has jaundice lasting rather long. It is now seventeen days since the attack and he is still jaundiced and there is distinct tenderness over the gall-duct. I take it that this is due to swelling of the mucous membrane partially closing the duct.

The diagnosis of gall-stone is usually easy. I do not know what it could be confounded with. Not with renal colic for there the pain is in the back, running into the genitals with retraction of the testicle and frequent desire to pass urine. The urine is affected, often bloody and no jaundice follows. Sometimes gall-stones pass and no jaundice follows. I have not rarely noticed that—a sharp spell of pain and gall-stone found in the feces and yet no jaundice, because the stoppage was too short to permit resorption of enough bile to stain the skin, or because the stone was so small that there was not complete occlusion of the duct. In these cases you may be thrown off the track as the spells of pain may resemble gastralgia. I would advise you, therefore, if you have

paroxysmal pains that seem obscure, to have the feces carefully searched. I have found gall-stones even where there was no trace of jaundice. Sometimes I have secured as many as six or eight calculi.

I shall not to-day dwell upon the treatment of gall-stones. The most important part is prevention. Where you know that a gall-stone has been passed, you are anxious to prevent the formation of others. I wish to emphasize particularly the importance of getting the mucous membrane of the gall-bladder and duct in as healthy a state as possible. A gall-stone passing through the duct will injure and inflame it; thus a gall-stone may lead to inflammation of the duct; but on the other hand, inflammation of the duct may lead to the formation of gall-stones. The mucous membrane, being in a state of catarrh and more or less swollen, interferes with the free flow of bile, which remains in the gall-bladder, causing its distention, and thus the flow of bile is slow. The branches of the biliary duct have their lining thickened and there is a tendency for the bile throughout the liver to be retarded in its flow. This slow flowing bile becomes thick and there is a tendency to the deposition of the biliary salts or biliary coloring matter. As a result of the inflammation of the mucous membrane, little flakes or shreds of mucus are formed, and may constitute a nucleus which at once becomes encrusted with biliary salts and coloring matter, and we have the beginning of a calculus. I have no question that in many cases the formation of gall-stones is invited and favored by the presence of catarrhal inflammation of the lining membrane of the gall-bladder and duct. Therefore, in order to prevent the formation of other calculi, it is important to have the condition of the mucous membrane as nearly healthy as possible. For this reason I like continued counter-irritation over this region. In this case I shall apply a series of small blisters, an inch and a half in diameter, repeating them at intervals of six or seven days. The man will be kept quiet, with light diet and a mild saline to keep the bile free and thin. At the moment of the attack you have to relieve the intense pain. The best agents for this purpose are morphia and atropia hypodermically. Chlorodyne by the mouth is useful; but as there is sometimes vomiting it is not so prompt as the subcutaneous injection. Suppositories are too slow. Frequently one hypodermic injection of a quarter of a grain of morphia with a one-hundredth of a grain of atropia will lull the pain, and before the effect is over the stone has passed. If necessary, the injection can be repeated. If the attack is over soon, there is no seriousness about it. The patient should be kept quiet until the jaundice has passed away. Then preventive treatment, to relieve the irritation of the mucous membrane and to get the bile to flow freely, should be instituted. In the present case I shall give the man, in addition to a small amount of Rochelle salts morning and evening, a pill three times a day containing:

℞ Argenti nitratis . . . . . gr. $\frac{1}{4}$
Ex. opii
Ex. belladonnæ . . . . . āā gr. $\frac{1}{10}$

Jaundice from Angeiocholitis.

I shall now call attention to a young woman who came to me some weeks ago, and whom I sent here to watch her case carefully. She was induced to come because of the great improvement which followed in the case of a friend of hers, who came here with terrible jaundice, emaciated to a skeleton, and with a history of repeated spells of pain with deeper and deeper jaundice. The spells were also attended with fever and great soreness in the region of the gall-bladder. That woman was kept here for a long time. The diagnosis made was: obstructive inflammation of the gall-duct. We never found any calculi, although we searched for them frequently. I cannot assert that the gall-bladder is not full and practically obliterated, the pain having stopped because the stones are fixed. It may have been that the stones were too large to pass through the gall-duct; but one might enter and produce spasm and severe pain with jaundice, and then slip out. After remaining here some time, the woman got well and the skin became perfectly clear. In that case recovery took place because we cured the condition of the gall-duct.

This patient gives us the following history. She was admitted to the hospital two months ago. She has been married four years, and has had four miscarriages, but no living child. She was always healthy and could do the hardest kind of work until after her marriage at the age of 21. Within eighteen months after marriage she had three miscarriages, which she attributes to hard work. There is no history of venereal trouble. She has never had any symptoms, and her husband is said to be a strong and healthy man.

Two years ago last March she had her last miscarriage, which she attributes to cold taken during "the blizzard." She has not been well since. She had rheumatism four years ago and measles in February of this year. There is no family history of importance. The present illness began in March, 1888, with her last miscarriage. It began with a sense of distress in the hypochondriac region and between the shoulders. In June she began to vomit. Menstruation was scanty. She had a spell of vomiting lasting three days, and after that, every month from June to December she had an attack of vomiting for three or four days regularly at the time of menstruation. The vomiting partly took the place of the menstrual discharge, but not entirely. After December the periodic vomiting occurred every two weeks, and now menstruation stopped until April, 1889. Then she menstruated. It again stopped in June, and did not return until November. While she had the menses regularly the vomiting was less and occurred only at the monthly period. When the vomiting spells came close together and were severe, the menses disappeared. In June, 1890, she again missed the monthly sickness, which has not returned. She has vomited nearly every day during the past summer, mostly in the morning. She does not raise much, but has straining and gagging. Sometimes the matters vomited are coated with a little blood. In March, 1889, she began to have pain in the region of the liver, which has continued. It occurred over the gall-bladder and extended through the abdomen to the right shoulder. The jaundice has never left her. The skin is deeply stained all over the body. The urine is loaded with biliary coloring matter. She has had more or less diarrhœa since June, 1889, amounting to four or five movements a day, thin and of a whitish color. Her usual weight is 172 pounds, which is now reduced to 105 pounds.

Here then we have a history of periodic vomiting with marked evidences of intestinal catarrh, lasting since June, 1889, with severe jaundice beginning in March, 1889, and continuing until the present time. You will find nothing more difficult than to make an exact diagnosis in such cases as this. The points which strike one most forcibly are, in the first place, the protracted catarrhal irritation of the gastro-intestinal mucous membrane. I do not see how we can shut our eyes to that as the most prominent feature, where you have such a history. It is extremely probable that the inflammation has extended from the intestine to the bile-ducts, and caused catarrhal thickening and obstruction of these ducts and consequent jaundice. This we term catarrhal jaundice. The jaundice is the result of angeiocholitis or inflammation of the biliary vessels of the liver. I have already stated that you cannot assert that there are no gall-stones. In angeiocholitis the obstruction to the flow of the bile permits the formation of gall-stones, which may be shut up in the gall-bladder or may have come out from time to time. In this case we have not had any spells of pain indicating the passage of gall-stones. The woman has had continuous, not paroxysmal pain. For twenty months, she has had continuous pain in the region of the gall-bladder. There have also been cutting and knife-like pains at irregular intervals. The pain has never been severe enough to require the hypodermic use of morphia. There has been no great amount of fluctuation in the jaundice. She has been jaundiced continually. All of this points to the existence of some fixed lesion about the liver, and whether there be gall-stones mixed with it or not, it cannot be gall-stones only, unless it is a large gall-stone impacted somewhere. A large gall-stone entering the cystic duct between the gall-bladder and the hepatic duct and being impacted there could give rise to such symptoms as we have here. Usually, however, a gall-stone lodged in that position sets up inflammation and causes ulceration with fever, rigors and sweat. The ulceration advances until the patient dies from exaustion or the gall-stone passes by ulceration into the duodenum and the patient gets well. I have watched many cases where the stone has thus slowly advanced by ulceration until the cystic duct is obliterated, and the stone enters the common duct and this is obliterated, and it passes into the duodenum, with the recovery of the patient and the finding of a large stone in the feces. A large stone in the cystic duct which has not set up inflammation might account for the symptoms. There has not been much fever in this case. Lately there has been a temperature of 101°; but the course of the case has not been marked by much fever.

Turning now to a physicial examination of the abdomen, I find that the edge of the liver extends three inches below the margin of the ribs, showing that the organ is greatly enlarged. The surface of the liver is quite

smooth, the edge is thin and sharp and at most the surface is slightly granular. There are no tumors. I tried to find the gall-bladder, but cannot discover it.

What I suppose has happened here is that this woman, broken down by hard work and repeated miscarriages, the nature of which we do not know, had a violent gastro-intestinal catarrh and the inflammation has extended into the bile-ducts and set up angeiocholitis with obstruction, preventing the escape of the bile. This obstruction has been almost complete. Then the inflammation has extended from the mucous lining of the gall-duct to the peri-vascular connective tissue, setting up that type of cirrhosis which is known as peri-vascular or hypertropic cirrhosis. Around these dilated and chronically inflamed ducts we have thickening of the tissue of the liver.

The liver is uniformly enlarged. There is no reason here to do a laparotomy. One of the points that we have to settle in reference to a case of this kind is whether or not there is an impacted stone which should be removed with the knife. We have decided against laparotomy because the evidences of stone are not great enough ; while the evidence that it is a case of this type of cirrhosis with chronic inflammation of the gall-duct is very strong. If that is the case, I cannot help thinking that this woman should get well.

I need not say that the question of cancer comes up in every case of this kind. I think the fact that the disease has lasted so long, and the fact that there is no distinct mass and that there is more or less fever, with the youth of the patient, would serve to exclude malignant disease. In older people it often is a difficult question to set cancer aside.

Crystal Coating for Wood or Paper.—Mix a very concentrated cold solution of salt with dextrin and lay the thinnest coating of the fluid on the surface to be covered by means of a broad, soft brush. After drying, the surface has a beautiful mother-of-pearl coating, which, in consequence of the dextrin, adheres firmly to paper and wood. The coating may be made adhesive to glass by doing it over with an alcoholic shellac solution. The following salts are mentioned as adapted to produce the most beautiful crystalline coating—*viz.*, sulphate of magnesia, acetate of soda and sulphate of tin.

Communications.

A VIEW OF KOCH'S REMEDY FOR TUBERCULOSIS.[1]

BY WILLIAM HUNT, M. D.,
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It is now time for me to speak briefly of the great medical event of the past year, which has attracted the attention and the hopes of the world at large, as well as of the profession of medicine and surgery.

Singularly enough, in January, 1883, it fell to my lot to give the annual oration before the Philadelphia Academy of Surgery. In that oration, the orator is expected also to notice what has occurred of interest to surgery during the preceding year. Koch announced his discovery of the bacillus tuberculosis in 1882, and that it was the cause of consumption and other tuberculous diseases. The announcement attracted as great professional interest as the one of 1890; but of course it did not create such a public *furore* as this one, because naturally the public are not interested to any extent in the *science* of medicine, but they are intensely interested in the cure of disease. It was a notable occasion in 1883, because we had, besides the oration, a microscopic exhibition of micro-organisms, among which were two or three slides (I think obtained by Dr. Formad) containing the bacillus tuberculosis. These were the first seen in this city and among the first in the country, and, of course, attracted much attention.

Now it becomes my duty to notice the startling announcement of the same indefatigable bacteriologist, that he has discovered a method of destroying tuberculosis tissue *in situ* and of thus preventing the ravages of the most potent enemy of human life known to mankind. Is it any wonder that such an announcement was received with profound astonishment, and on the part of all with the most respectful, and, I might say, with the most reverential regard? Berlin was the centre of attraction, Koch the object of honor. We all know how the representatives of science and the victims of sickness flocked to that city.

It is unnecessary for me to go over the

[1] Portion of an address delivered at the last annual meeting of the Association of Ex-Residents of the Pennsylvania Hospital.

history in detail, as it is familiar to all. The efforts at secrecy, the general and professional condemnation of this course, the revealing of the composition of the remedy, the spare granting of small quantities of it to certain favored ones and the distribution to different parts of the world of the precious liquid are equally well known.

And, with it all, no disrespect, no denunciation or no ridicule of the famed discoverer. His behavior throughout has been grand. He never wished for publicity, but was forced, as it were, by popular and professional clamor into exposure. Time, much more time, was required for laboratory and test work.

When, then, he announced, "The remedy, therefore, is a glycerine extract of pure cultivations of tubercle bacilli," he made no boastful claim, but told us how and when to use it, and of its dangers as well as of its benefits. Is its use to end in bitter disappointment or not? Koch, himself, must have been as interested as any one in that remarkable lecture—we might say clinical lecture—of Virchow's, held the 7th of January, 1891, when he discussed Fraenkel's paper at the Berlin Medical Society. I do not think Koch was present. The scene must have been very impressive. The veteran and profound pathologist stood at his table, and on it were what was worth showing, from *twenty-one post-mortem* examinations of patients who had died after the injection treatment. Think of this at one clinic! Of the twenty-one, 16 were cases of pulmonary phthisis. These were the cases to the end of December. The lecturer speaks of 6 or 7 cases in the present year up to January 7, and he says, "in addition to this my assistants have made necropsies in a large number of similar cases at other hospitals and in private, and I have seen the most important results of the examinations." The crowded audience gazed with intense and silent interest, as he took up piece after piece and showed the changes that he thought were due to the old disease and those that were brought on by the new treatment. No word of disapproval or ridicule escaped him. The specimens themselves proclaimed their own lessons. A mere superficial notice of what was shown and said at that lecture can only be made here. You may have read it, or if not, you can read it in the *British Medical Journal*, of January 17. He showed extra hyperemias in a case of tubercular arachnitis, and evidently thinks that the fatal result was precipitated by the remedy.

Again he says, "In particular it was repeatedly noted by us, that even the surfaces of pulmonary cavities showed unusually intense redness of the granulation layers; moreover *hemorrhagic* infiltrations of the walls were not seldom present, and even recent hemorrhages were observed in the cavities."

After describing certain swellings, rapid proliferations, etc., he says: "These swellings occasionally assume a very dangerous character. I will only refer to the phenomena which are seen in the larynx, where even in cases where the ulcerated surfaces become clean, the adjoining parts swell to an enormous extent and cause constrictions of a very critical nature. Together with these changes there occasionally occur other more violent forms which take on a phlegmonous character and remind one of œdema glottidis erysipelatodes, and retro-pharyngeal abcess"—and here he showed specimens.

Again: It was noticed that among the fatal cases of ulcerative phthisis that the large majority exhibited recent changes of great extent, more particularly in the lungs, but also pleurisy and for the most part very severe pleurisy, simple and tuberculous, frequently hemorrhagic, and not infrequently bi-lateral. He then, with the fairness of a fair-minded man, discusses whether the lesions exhibited were due to the treatment, or would have occurred in the natural progress of the disease. Showing a specimen he says, "From the most characteristic of one of these comes this piece of lung, which shows such extensive caseous hepatization that I do not remember to have seen anything like it for years." And then, most important of all, he discusses the development of *fresh* tubercules in these cases, and gives by observations strong proofs of their happening, and says: "I am strongly convinced that these fresh eruptions first appeared *ex-post*." He speaks of the mobilizing of bacilli and setting them free to attack other parts, and gives a characteristic example. The breaths of the audience must have almost stopped at the end of this lecture.

After reading it at the library of the College of Physicians, I was involuntarily reminded of the drawings we have in the Mütter Museum, taken from Dr. Weir Mitchell's cases, and showing the effects of rattlesnake bites on pigeons. Man often is a stupid

animal. He knew the anatomy and action of the rattlesnake hypodermic, years before he invented a little machine for his own professional use. This dreadful Virchow lecture shows that now he can compete with the snake for results.

Hear the other side! Is there one to hear? Has a favorable report been given anywhere in the world to offset this one of Virchow's? I can find reports of none, and I have looked over many reports. Every clinician is in waiting. The editorial in the same journal that publishes the report of this clinic is very fair. It says: "That these observations are of enormous value; that any one who thinks that all that is necessary to practice Koch's method is to have a bottle of the lymph and a hypodermic syringe, is mistaken; that he who thinks of carrying it out should make himself thorough master of Koch's original statements, which are calm to a degree and are as unbiassed as any man could expect those of the author of such a method to be. The method is still on trial and those who wish to keep an open mind can do so only by a careful study of scientifically observed facts as they are placed before us."

And so say we all of us—Wait! That the present dangers are recognized through the influence of Virchow's clinic, is shown by this telegram in our papers dated Feb. 13—only four days ago—"An important discovery. Dr. Weyl, an associate of Professor Koch, has discovered a method of detecting in the Koch lymph the poisonous elements described by Professor Virchow, and of eliminating them so as to produce a lymph free from bad properties."

There is nothing new. That charming and learned writer, Benjamin Ward Richardson, has a short article in the last number of the *Asclepiad*, on Pulmonary Consumption, which opens thus: "In many parts of provincial England it was once a practice, hardly yet abolished everywhere by the common people, to treat persons affected with consumption of the lungs by making them swallow live snails. The vulgar idea of the *modus operandi* of the medicine was that the snails found their way to the lungs of the patient and ate the black worms which lived on the lungs and caused, by their depredations, the disease. The snail treatment got a great reputation, for which probably it depended on two collateral causes. The persons who were benefited by it were led to seek the remedy in purer air than they had been accustomed to live in; and in addition to the snail, which did neither good nor ill, they partook freely of new milk and cream, rich foods likely to be important adjuncts in the cure. Of late the idea that pulmonary consumption is a parasitic disease is revived. The lungs infested with hosts of a specific bacillus is supposed to be destroyed by them or by the secretion which they eliminate; and the mode of cure is expected to be found in a lymph or poison which shall kill the bacillus without injury to the patient." Further on the writer shows that he keeps his opinions in reserve for he says: "But scientific medicine is conservative and careful before she speaks a word; and the more so because, in her too ready acceptance of speculative practice in former days, she has reason to become wary and chary of belief. Some of her children run after new remedies and false gods fast enough; and many, no doubt, will run after this new promise long before there is sufficient evidence either for its establishment or its delegation to the shades of departed fallacies."

Again we say, Wait!

VERATRUM VIRIDE.[1]

BY AARON C. WARD, M. D.,
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A careful study of the pathology of pneumonia not only leads to the conclusion that bleeding does harm, but that the use of all those agents which have been employed for the arrest of simple pulmonary inflammation are contra-indicated strongly. Hence veratrum viride, aconite, antimony, calomel, and all so-called "cardiac sedatives" have been discarded, for it is evident that they add a new load to an already over-burdened heart. They may for a time lower temperature and pulse rate, but this will be accomplished at the expense of heart power. "Cardiac insufficiency will therefore appear earlier and be more profound;" so says Prof. Loomis, and the principle expressed in this statement underlies the practice and teaching of a large class of intelligent physicians, whom we are wont to look upon as authorities.

That what seems to us an error should have such a strong foothold is the excuse for this brief essay. I believe the above position

[1] Read before the Practitioners' Club.

is untenable, and the arguments used in its support unsound physiologically and physically. For, first, the circulatory activity which occurs in pneumonia is not compensatory; that is, it is in no way dependent upon or proportionate to the obstruction existing in the lung or the consequent diminution of respiratory area. This is demonstrated by the fact that in all cases the cardiac activity is in excess of the amount necessary to compensate for the defective respiration; by the fact that we find just as high arterial tension and just as rapid heart-action when one lobe is involved as when two are; and, again, by the fact that the same condition of the circulation exists in other inflammatory affections where the respiratory surface is neither diminished nor its functional activity impaired.

In the second place, the amount of compensation which is rendered necessary is largely accomplished by the increased rapidity of the respiratory acts; while it would not be difficult for the respiratory apparatus, under favorable circumstances, to compensate entirely for its own defect without making any extra demand upon the heart. Moreover, such a result is eminently desirable, for the muscular apparatus of respiration can better bear over-taxation than can the heart.

In the third place, suppose that heart failure in pneumonia is principally the result of the effort of the heart to overcome the increased resistance in the lung, even so the auxiliary proposition is untenable—namely, that cardiac depressants increase, while stimulants decrease, the burden thrown upon the heart and the venous stasis which results. The converse proposition is much more rational and more in accordance with the facts. For though it is likely that arterial tension alone is not sufficient to produce exudation in an otherwise normal circulatory apparatus, yet it is certain that from the instant exudation is rendered possible by pathological changes in the walls of the vessels, the higher the arterial tension, the more rapidly the exudation takes place, and therefore the greater will be the severity and extent of the local inflammatory process. Again, if we consider the circulation as a whole we will see that the blood must complete the circuit of the pulmonary capillaries in the same space of time that it traverses that of the systemic capillaries. It follows that, whatever the pressure, if we could introduce an obstruction to the flow of the blood through a part of either system, the circulation in the remaining normal part of that system would of necessity be more active; in other words, there would occur in the rest of that system a compensatory or active hyperemia. Under such circumstances, any pathological condition which would increase the rapidity of the general circulation would proportionately intensify the embarrassment of the defective system, and *vice versâ*.

Again, the amount of energy necessary to be expended in injecting a given amount of fluid into an elastic reservoir is proportionate to the tension already existing in such reservoir.

Now the tension of the systemic circulation is normally at least five times greater than that of the pulmonary circulation. Therefore, to overcome any given increase in the systemic arterial tension requires the expenditure of five times as much of the heart's energy as a corresponding increase of tension in the pulmonary circulation; or, in other words, it would not be difficult to prove that the labor thrown upon the heart by the increased arterial tension of the systemic vessels which exists in pneumonia, is greater than that which would be caused by the total obliteration of the circulation through a whole lobe of the lung. Under such conditions it follows that we can do as much to save the heart from exhaustion by lowering the arterial tension of the system at large as we could were it possible for us to remove entirely pathological resistance existing in the diseased lung.

Again, the rise of temperature which occurs is proportionate to the circulatory activity, and is produced by the excessive oxidization and tissue waste which such abnormal circulatory activity makes possible. "No argument is necessary to convince you that the vital powers are rapidly exhausted when the heart is driving the blood through the system at the rate of 120 or 140 beats in a minute." Could anything be more irrational than to allow the heart to waste its own energy in destroying the energy of the system at large, and content ourselves with alleviating one of the injurious results of this process when it is within our power to remove the cause?

Again, we find the same physicians who so strenuously oppose the use of veratrum in pneumonia, in the next breath recommending other agents, whose value, where any such exist, rests upon the same basis as that

of the veratrum they discard. Or we find them using this same veratrum in other affections, in which practically the same conditions exist, and the same therapeutic indications are to be met as in pneumonia. For example, Niemeyer says in favor of the "bath" in pneumonia: "the temperature declines, and pulse falls and becomes soft and compressible, the skin grows moist and the patient feels refreshed," and this same authority, to use his own words, "feels it necessary to emphasize the evil effect of cardiac sedatives" administered in this disease. Or, again, how do those who contend that veratrum is inadvisable in pneumonia because it augments venous stasis and increases the labor of the heart, explain their endorsement of its use in the hypertrophy of the heart of chronic Bright's, where, practically, the same circulatory conditions exist?

Finally, we meet in practice several classes of cases such as chronic interstitial pneumonia, etc., where, as far as the lung is concerned, the circulatory conditions are identical with those in pneumonia, and yet in these cases there is no embarrassment of the heart, no compensatory hypertrophy, and no venous stasis, even though the disease has existed for years. Could any evidence be more conclusive?

If the foregoing reasoning is sound, I think I have proved that the rational treatment of the first stage of pneumonia is to reduce arterial tension, as far as that is possible consistently with the performance of those functions for which the circulation exists, namely, the distribution of nourishment and oxygen and the elimination of waste products. The degree of circulatory activity which may be necessary to attain these ends may be greatly reduced, on the one hand by supplying the nourishment and oxygen in such a form and degree of concentration as shall render assimilation more easy and rapid, and on the other hand by assisting in the many ways at our disposal the activity of the other emunctories, that their increased functional activity may compensate for the impaired elimination through the lungs.

In the foregoing argument we have spoken of pneumonia, because it is more easy to treat anything in the concrete than in the abstract, and also because pneumonia furnishes one of the most important applications of the principles involved. The conclusions at which we have arrived in the case of pneumonia are equally applicable to almost any other acute inflammatory process accompanied by high arterial tension; for example, pharyngitis, tonsillitis, laryngitis, bronchitis, bronchial pneumonia, pleuritis, peritonitis, nephritis, etc. To accomplish the desired sedative effect upon the circulation, our professional ancestors had resource to venesection, and though this occasionally proved of great service, yet, unfortunately, it involved an absolute loss of vital power, which experience has gradually taught us overbalanced the advantages to be gained. The practice has therefore fallen into disuse.

I shall not, however, consume your time in attempting by comparisons to demonstrate a proposition which, it seems to me, is beyond question, namely, that veratrum viride is the most rapid and most efficient cardiac sedative we possess; but I will turn immediately to the consideration of the other objection raised by its opponents, namely, that its sedative effects are obtained at the expense of heart power.

Any discussion of the physiological action of the several alkaloids present in this drug is foreign to our subject. Suffice it to say, that its physiological action as a whole is due to the combined effects of at least three distinct alkaloids, individual actions of which differ mainly in degree.

The important and characteristic actions of veratrum viride can all be considered under the two main heads; its effect on muscular activity and its effect upon the nervous system. Veratrum diminishes muscular excitability. This is an important fact, for while the sympathy of the motor nerves in this action is not completely disproved, yet it is demonstrated beyond a doubt that the action of veratrum viride mainly affects the muscles, and that its influence on the motor nerves is comparatively subordinate. A muscle so poisoned reacts for a long time to direct or indirect irritation, but this action is different from that which occurs in its natural condition. For while the contraction is performed in the ordinary time, the relaxation is very much protracted.

Veratrum exerts little or no influence on the motor and sensory nerves and upon the cerebral centres. To this statement there are several exceptions: the vasomotor centre is powerfully depressed; the activity of the pneumogastric is stimulated; the reflex of the spinal cord is at first markedly diminished and finally abolished; while the effect on the respiratory centre is in doubt. Whether or not this centre is affected, it fol-

lows from what has already been said in regard to muscular activity, that respiration must be slowed and finally cease. In the case of the heart, the same reason holds good, but here another factor enters the problem. The pneumogastric being more rapidly affected than muscular activity, the heart's action is at first slow, without the force of the individual beats being much altered. Later, when the muscular tissue of the heart feels its influence, the force also is lessened. Larger amounts of the poison finally produce paralysis of the terminals of the pneumogastric and of the cardiac muscle. The ultimate effect, therefore, on the heart is complete paralysis.

In consequence of the powerful depressing influence upon the vasomotor centres and the diminished force and frequency of the heart's action, arterial pressure is progressively and rapidly diminished. The free perspiration which occurs is another result of the vasomotor depression. The pulse, under the combined influences on the circulation, is at first slow and full, though always soft and compressible; later its strength is diminished, the rapidity being at the same time even further reduced.

The symptoms of a poisonous or excessive dose are simply an exaggeration of the physiological effects, and are almost precisely like those produced by tobacco in persons unaccustomed to its use. Intense nausea; incessant and violent vomiting and retching; complete muscular prostration with attacks of dizziness or fainting; slow and superficial respiration; a small, feeble and sometimes almost imperceptible pulse; an expression of great anxiety; a cold, clammy skin—these and associate symptoms present a condition which is at once distressing and alarming.

The rapidity with which the effects of veratrum viride disappear when its administration is suspended, and the almost entire absence of any persistent derangement of the functions affected, have been matters of general observation. They follow naturally as the result of the *modus operandi* of the drug and the rapidity of its excretion. The importance of their practical bearing is apparent. For if the physiological action of veratrum, as given above, is correct, it refutes the second objection raised by our opponents, and, on the contrary, warrants the assertion that veratrum is a heart tonic in the broadest sense of that word. This error probably arose because, while observing phenomena, the fact was lost sight of that there is a real and positive distinction between a weak pulse of repressed energy and that which results from absolute loss of power.

Just here it is proper to state, and to emphasize the statement, that while veratrum will absolutely and invariably control the quick, hard pulse of inflammation, it just as certainly will *not* reduce a feeble, rapid pulse of exhaustion, and this for the very simple reason that you cannot conserve energy which does not exist. Failure to recognize this distinction probably accounts for many of its reported failures.

The next question naturally presents itself: Is not the administration of such a drug so hazardous as to render its general use undesirable? This I answer in the negative, without any hesitation or qualification. While there are on record numerous cases where the alarming condition of the patient gave reason to expect a fatal result, yet in almost every instance we find that complete recovery has ensued. The number of fatal cases is small. On the other hand, the testimony of those who have given veratrum the most thorough trial and whose ability to judge is beyond question, is unanimous to the effect that there is practically no danger attending its use—absolutely none when intelligently administered.

Referring to the unpleasant symptoms resulting from an overdose, Barker says: "After an experience of more than thirty years in the use of veratrum, I feel warranted in saying that these phenomena are really not dangerous. I have never known any serious result to follow from its use. This condition is purely temporary, and patients pass out of it in a short time, even if no restoratives be given."

Wood affirms that, "although veratrum viride is a remedy of great power, capable of producing the most alarming symptoms, yet I believe it to be the safest of all cardiac depressants; certainly it is far less dangerous than aconite. It is somewhat doubtful whether a robust adult could be killed by a single dose of any of its preparations, especially if prompt and judicious treatment were afforded."

The evidence adduced is surely sufficient to establish the assertion that its intelligent administration is devoid of danger. It is no argument against a drug that it is capable of doing mischief, if, when intelligently and judiciously administered, its therapeutic value

is available without incurring the risk of such mischief. To advance such an argument is to plead ignorance or indolence.

The therapeutist has at hand numerous drugs which, if not more powerful than veratrum viride, are yet more singly spinal depressants. The field of its usefulness in this direction is therefore limited. I hope to show, however, that there is one condition in which its composite therapeutic effect renders veratrum the most valuable spinal depressant at our disposal.

However widely authorities may differ in their theories as to the exact pathology of puerperal convulsions, or in the remedies that they may advocate for the treatment of the same, there is practical unanimity as to the therapeutic indications to be met. Briefly these are, to lower arterial tension, to diminish to the fullest extent practicable the irritation of the vaso-motor and convulsive centres, and to restore to the kidneys their normal function. Venesection meets the first indication perfectly, by rapid reduction of the volume of the blood. It meets the second indication, though partially only, by removing a part of the toxic ingredients from the circulation, and by both these means it relieves somewhat the renal embarrassment. The testimony as to the prompt relief afforded is overwhelming, and this not only by those who wrote at the time when venesection was the orthodox treatment, but to-day, when in the face of public sentiment we find such men as Barker, Lusk and others pleading for the restoration of the lancet, and insisting upon the unmistakable clinical evidence in its favor. All admit, however, that because the arterial tension is rapidly re-established and the remedy cannot be repeated, the relief afforded is only transient, while the deterioration of the blood which ensues cannot but increase the danger of the disease. Its employment, therefore, is justifiable only in a most pressing emergency, on account of the rapidity of the relief afforded, and as an expedient to gain time for the action of other more satisfactory measures.

I have considered venesection to such length, principally because its success confirms a point which I desire to make, namely, that the reduction of arterial tension alone is sufficient to afford relief in this most distressing malady. The other agents most generally employed to-day are chloroform, chloral, potassium bromide and morphia. These are dependent for their usefulness on their antispasmodic power, since in the quantity which can be administered with safety they either do not at all influence arterial pressure, or they exert an unfavorable influence by raising it. They are not without merit, but as in each case this is qualified or offset by some danger or unfortunate concomitant action, their employment should, we think, be secondary and supplementary to the use of that remedy which theoretically and practically fulfils all the indications more perfectly than any single agent in the pharmacopœia. This remedy is veratrum. For veratrum is both the most powerful of arterial and of spinal depressants, and, at the same time, exerts a specific depressing effect upon muscular tissue in general. In other words, veratrum is not only a central antispasmodic, but a peripheral antispasmodic as well; if I may be allowed to use such an expression. Its action, moreover, is rapid and can be maintained almost indefinitely without danger. As regards the dosage in this condition, all that can be said is that enough must be given to bring the pulse down to about 60, and its administration must be continued for some time afterwards, and in such smaller doses as shall be sufficient to keep the pulse at about this rate. In order to save time, the initial dose at least is best given hypodermically.

In conclusion, I will cite briefly three cases to illustrate in practice the principles for which we are contending.

Case 1. Mrs. H., 45 years old, strong, well-nourished, previously well, was seized with a severe chill, followed by rapid rise of fever and pain in the side. I was called six hours later. The patient's face was flushed; pulse, 116, full and strong; temperature, 104°; stitch-pain in right side; frequent, restrained painful cough; pain intensified by full inspiration; respiration, 28. There were physical signs of pneumonia in the first stage, affecting the lower lobe of the right lung. I gave calomel (gr. x), sod. bicarb. (gr. xx), and tincture of veratrum viride (♏ iii), followed in half an hour by ♏ ii, and afterwards ♏ ii each hour. Counter-irritation was employed, etc. After the third dose of veratrum the pulse was 56; temperature, 102°; slight nausea; pulse maintained below 60 or 65 for two or three days. The physical signs persisted, increasing very slowly. The patient recovered, without having had consolidation of the lungs, in about the usual time. The inflammation seems in this case to have been held in check, the

lung never getting beyond the stage of intense congestion.

Case 2. A strong, healthy boy, 10 years old, had a severe chill with fever, cough, dyspnœa, etc. Six hours later his temperature was 103°, pulse about 140, respiration about 70. There was great dyspnœa; the skin was somewhat cyanotic; the cough was frequent and distressing, without expectoration. Prostration was great. There were physical signs of intense congestion of the lungs; the patient was apparently dying. Veratrum was given in frequently repeated small doses until the boy was nauseated. After three hours I saw the patient again; he was quiet, dyspnœa was relieved, the skin was more natural in color, the pulse below 90, and the respiration about 40, the temperature being 102°. The pulse was kept between 80 and 90, and recovery was rapid.

It does not follow that veratrum viride is to be discontinued after the first stage of pneumonia. While I am opposed to the custom of giving stimulants, saline or alcoholic, as a routine practice, yet I am perfectly willing to admit that, from this point on, their use in greater or less quantity is called for in a large proportion of cases. If at the same time we stimulate, however, we can so regulate the energy evoked that it shall be utilized with the least possible waste, we are doubly at an advantage. This we can accomplish by giving small doses of veratrum viride, along with a proper amount of alcoholic stimulant. For you will remember that the primary effect of veratrum is to decrease the rapidity of the pulse without affecting materially its quality. This primary effect can be maintained if the dosage is properly regulated. The administration of veratrum is not at all incompatible with the use of alcoholics, as is apparent in the following case, cited by Dr. Barker: "Veratrum viride alone did not seem to produce any effect on this case, the pulse remaining constantly above 130. It was decided to give brandy. After the first ounce had been given the pulse fell to 108; after the second to 86. Continuing the brandy, the veratrum viride was suspended for a few hours. The pulse again arose to 130. After this, it was curious to note the fact that if either agent was suspended, the pulse would rapidly increase in frequency, while under the combined influence of the two it was kept below 80 per minute."

PUERPERAL PNEUMONIA.

BY JAMES E. FREE, M. D.,
BILLINGS, MONTANA.

Mrs. S., primipara, was delivered of a female child weighing six pounds, May 23, 1890. She was a large, lank woman at the time of her lying-in, had been married about two years, and was thirty years old. Two months previous to this time she contracted the grippe, which did not develop any very serious symptoms, although it proved to be a tedious complaint. A slightly annoying cough was still present when labor set in. At 1 A. M., the sharp pains having lasted two hours, delivery was accomplished. It was an ordinary case, causing less suffering than is usual where the mother has reached such a mature age.

Some hemorrhage followed the shedding of the placenta, and ergot was administered to make the uterus behave physiologically. It is rarely necessary in a primipara, and in this case it might not have been so. However, it is a bold physician who will face a lot of old women and tell them to wait on Nature, when they know that a friend is bleeding. Two hours after delivery, the patient having brightened up considerably, a binder was applied, and the soiled clothing was removed. The woman's temperature at this time was 99°, her pulse 100. She expressed herself as comfortable while she remained perfectly still, and thought she could sleep. Between four and five o'clock in the morning I was summoned in great haste to her bedside. I found her suffering acutely with pain in the back. The pain was constant and located on both sides of the spinal column in the lumbar and dorsal regions, and it radiated downward to her feet. Not having had any similar experience, it was difficult for me to tell the origin of the trouble. Opium eaters are liable to have attacks of acute pains when they are in want of the drug, but here it did not seem as if the appetite was present. Ergot produces tonic spasm of uterine muscular tissue which is sometimes painful. Taking into consideration the amount of exercise the organ had undergone, it was not likely that fatigue would be the cause of the pain. When a set of muscles have been sharply used, or the use has been long continued, they show signs of exhaustion when moved. Perfect rest will generally partially relieve even

rheumatic pains. Here the uterus, after a normal labor, was contracted and at rest. The neuralgic symptoms were considered to be indicative of anemia of the cord. The woman's temperature was 98°, her pulse 96. A Dover's powder was ordered, which induced sleep and free diaphoresis. Several hours later she was put on Fowler's solution. The dull, colorless expression of countenance was similar to that of most victims of the morphine habit, and I thought more or less of the drug was necessary to a safe getting up.

Nothing of note occurred for several days. On the fourth day a decided rise of temperature was detected, morning 101°, evening 102°. The uterus was washed out three times in the next thirty-six hours, and antifebrin was prescribed. The patient was apparently comfortable until the physiological effect of the antifebrin became marked, when remarkable sweating, producing collapse, made it advisable to withdraw the remedy. Its anodyne effect was similar to that of the Dover's powder; but the latter seemed to fill the long-felt want for opium. Almost everything else nauseated the stomach when she had learned the effect of the ipecac and opium.

Two weeks after her confinement the patient was out of bed in a rocking-chair. She complained of so many troubles and seemed notwithstanding to be so strong, that she was allowed to get up. In the afternoon of this day she had an attack of acute pain in both legs. Her description of the pain, following the course of the large blood-vessels, made it probable that phlegmasic alba dolens was about to complicate matters. Fowler's solution and Dover's powder did not check the pain this time. Quinine could not be retained; neither could aconite. The temperature again went up to 102°. Lochial discharge was still present. The uterus was again washed out with warm water, but without any effect on the fever. Next morning a violent rigor, accompanied by intense internal congestion, came on, and lasted for two hours. Pain in the right side at the base of lung made breathing difficult and shallow. Auscultation and percussion revealed nothing abnormal. Blood-letting was indicated at this time as much as ever in my observation. However, as the lancet was wanting, also the cups, I concluded to fight it out with alcohol, mustard and hot water to the feet.

The next morning there were was almost complete percussion dulness on the right side, and an involvement of the lower border of the left lung. Pneumonia is said to be a treacherous disease, and if it was all this time manifesting itself in this case, it surely is entitled to that reputation.

The patient all along denied that she knew anything about morphia or opium, but the word of an habitué of these drugs is worthless. The temperature was 104½°, the pulse 150, the respirations 43. The aspect of affairs was very serious, and a consultant was asked for.

After an examination the consultant rejected the theory of opium eating, and suggested the administration of veratrum viride and a carbonate of ammonia mixture, with nothing hypnotic unless the cough was troublesome. The new treatment did not do well. Regular doses of brandy and cream and hypodermics of morphia at bedtime, to secure rest, was thought to be better, and consequently the consultant washed his hands of the case, and prophesied a speedy fatal issue.

It required eight weeks to establish convalescence. The temperature remained near 104° for seven weeks and then gradually subsided, and, as the fever left, a desire for food returned. Most troublesome of all the symptoms during the period was the dyspnœa, which showed itself every day, and threatened to terminate life, at first. Euphorbia pilulifera had recently come under my observation as a respiratory tonic, and its use in this case was beneficial. A half teaspoonful of the fluid extract given at the commencement of the dyspnœa, generally relieved it, but did not appear to have influence over its return. It was administered regularly latterly, and seemed to prevent the occurrence of the symptom. When expectoration commenced, the euphorbia was still a valuable remedy, seeming to promote resolution, and to act as a general tonic. While the difficulty of breathing lasted, its effect on the heart was analogous to that of digitalis, with more of a tendency to brighten the nervous force, and without any special action on the urinary function.

By October 1, the patient was in a lumber camp, away from drug stores, and with no opportunity to get opium. She had not yet entirely recovered health and strength; constipation was troublesome, headache was common and any kind of exertion was irksome and produced palpitation of the heart.

NEURALGIA FROM TOOTH-PRESSURE.

BY C. H. M. NEALL, M. D., D. D. S.,

PHILADELPHIA.

A gentleman called at my office on January 24, suffering with violent pain over the region of the left temple. The pain extended down to the angle of the inferior maxillary bone on the same side. I found, on examining the mouth, that he had erupted all of his teeth except the "wisdom tooth" on the right side, and upon making pressure over the gum in this region, that he experienced a great deal of pain. I found the gum and parts much inflamed. After satisfying myself that the tooth was the cause, I proceeded as follows. I made a free incision and found that the masticating surface of the tooth was deeply imbedded in the calcellated structure and pressing directly against the inferior maxillary division of the fifth pair of nerves. I extracted the tooth with some difficulty, and found that its root was exostosed. After removing the tooth, I syringed out the cavity with a 1-1000 solution of corrosive sublimate, and brought the parts together by means of a stitch. On January 27, the man returned to my office, informing me that the neuralgic pain he had suffered had entirely disappeared.

I have seen a number of cases like this in my own practice, and believe that we may many times trace neuralgic affections to cutting of the teeth.

PERISCOPE.

Dangers of Syringing the Ear.

In the *Atlanta Medical and Surgical Journal*, February, 1891, Dr. S. L. Philips, of Savannah, publishes an article in which he reports the case of a man, 54 years old, in fairly good health, save when suffering from bleeding piles, who for some weeks had experienced dulness of hearing on left side, and wished, if possible, to be relieved. On inspection, the canal of that side was found to be of average size, and containing a considerable amount of hardened wax. With a small rubber ball syringe, holding about an ounce and a half of water, filled with lukewarm water, Dr. Philips began to syringe the auditory canal. Several syringefuls forced gently into the ear not bringing away the wax, he used a little more pressure. Suddenly something seemed to give way. Water poured from the patient's left nostril, and he complained of a peculiar sensation in that ear, though he had no pain worth speaking of. The wax was loosened and easily removed from the canal. Dr. Philips thought, of course, he would find a perforation of considerable size in the membrane, the sequel of an old purulent inflammation of the tympanum, as sometimes wax forms over the opening, mixing with the secretions from the diseased mucous membrane, making quite a hard impervious wall to the secretions behind. When he looked at the drum-head he did not find what he expected, but one almost intact. It was congested in every part save the posterior superior quadrant. From the top of the malleus running down and back to the bony wall was a thin line of blood indicating the course of a recent rupture, and scattered here and there in its immediate region, a few drops of blood, which were easily wiped off with a piece of cotton wool. At this time there was no gaping. Under suitable treatment in two months the opening had closed, leaving only a thin line of scar, and hearing had become normal, he experiencing no inconvenience. Several months afterwards the membrane gave way at this point from too vigorous blowing of the nose, but the parts soon united without any treatment whatever than a piece of cotton wool worn in the canal for a while, since which time he has been all right.

In looking over the literature of the subject at his command, Dr. Philips finds but one case where rupture of the drum membrane took place from syringing the canal.

The above case teaches that one cannot be too careful in performing even this apparently trivial operation of syringing out the ear. Very great force is not necessary, and a powerful syringe is not needed. Some physicians have claimed that syringing could never do harm, provided only water was used, but Dr. Philips cannot agree with them. Only a short time ago Dr. Philips saw a little sufferer with chronic catarrh of middle ear and eczema of canal, the latter produced by an almost daily syringing for a year. The physician had diagnosticated wax accumulation, and given the mother directions to syringe out ear until she removed all wax. This treatment she kept up faithfully, but she never saw the wax in the returning water, and finally, when the ears

had become very painful the child was put under his care. After the usual treatment for aural catarrh, hearing was completely restored, but for a time the tendency to a recurrence of the eczema remained. While syringing is a good thing at times, its indiscriminate use is not good, and when it is necessary to use it, the greatest care and gentleness should be exercised. In purulent troubles of the ear, usually one syringeful of water will be sufficient to remove all *débris*, and when there is impacted wax a weak solution of bicarbonate of soda poured in the ear will, after several hours, so soften it that it can be removed without difficulty.

The Revival of Venesection.

The *British Medical Journal*, January 31, 1891, says editorially:

The discussion which took place at the last meeting of the Royal Medical and Chirurgical Society of London was in many respects interesting and noteworthy. Dr. Pye-Smith is to be congratulated on having so effectually succeeded in directing attention to a subject which must always have a real, if even only a historical, interest.

The reflections and conclusions contained in the paper were based upon the record of some fifty cases coming under the notice of the writer, in which venesection had been resorted to. The range of diseases in which it was employed included such acute affections as bronchitis, acute broncho-pneumonia, lobar pneumonia, miliary tuberculosis of the lungs, with others of more chronic nature, such as valvular disease of the heart with pericarditis, Bright's disease, aneurism and epilepsy; its value in other conditions, such as hemoptysis, apoplexy, uremic coma, was also considered.

The discussion which ensued was remarkable, on account of the almost complete unanimity which the speakers expressed in favor of the adoption of this method of treatment in suitable and urgent cases. All testified to the great and immediate relief which venesection gave under such circumstances—a relief unattended by any ill consequences on the subsequent progress of the disease.

Considerable differences of opinion, it is true, existed as to the cases most likely to be benefited by the treatment, or, rather, as to the cases which, in the experience of the various speakers, had most benefited by the treatment. For it was one of the noteworthy features of the discussion that there was a commendable absence of recourse to theoretical considerations as a basis for the practice.

In this respect the subject of venesection occupies a different position from that held by it in the former "bleeding era," to which reference was made in such humorous and instructive fashion by Sir George Humphry and Mr. George Pollock. The practice was then based on the humoral pathology which so long dominated the practice of medicine—that pathology which ascribes disease to the presence of deleterious agents in the blood, and which seemed, therefore, to justify the withdrawal of a certain quantity of the noxious blood as one of the best ways of curing it. As Dr. Broadbent pointed out, it was because the practice had been based so entirely on theory that it was carried to excess, and fell into such disrepute.

One of the chief merits of Dr. Pye-Smith's paper and of his subsequent remarks was to lay stress on the importance of resorting to venesection—not for the cure of pathological conditions as such, but for the relief of distressing symptoms depending on temporary alterations in the physiological balance of the circulation. As to the first indication laid down for the performance of the operation—cyanosis with distention of the right side of the heart depending on pulmonary or other obstruction to the circulation—there was a consensus of opinion favorable to the operation, but Dr. Broadbent did well to point out that before resorting to venesection under such circumstances, there should be evidence, as shown by the disparity between the strength of the heart's beat and the weakness of the pulse, that the right ventricle was still acting powerfully, and able to take advantage of the relief afforded it by the withdrawal of blood.

As to the second indication—the pain of aortic aneurism—the cases mentioned by Dr. Pye-Smith and Mr. Hulke, in which instantaneous relief was thus given, were very striking; and evidence of its curative effect on the aneurism was also incidentally adduced by Mr. Jonathan Hutchinson. Nevertheless, as Dr. Stephen Mackenzie pointed out, it may be doubted whether in iodide of potassium, nitrite of amyl and nitroglycerin, we do not possess remedial agents equally powerful and equally efficacious in relieving the high arterial tension on which such attacks of pain depend. The discussion, indeed, brought out the fact that it is

in relieving pain that venesection finds one of its best applications, and more especially in relieving the intense inflammatory pain of pleurisy, pleuro-pneumonia, or the severe pain with threatening onset of cerebral symptoms following injury to the skull.

To those accustomed, as most now are, to regard loss of blood, from whatever source, as an unmitigated evil, the suggestion to follow up an extensive bleeding from the lungs by a further bleeding from the arm, is startling. Nevertheless, something can be said, and was adduced by one of the speakers, in favor of its adoption in cases in which the patient is in urgent danger of suffocation from the reflux of blood into the bronchi. It is, however, peculiarly open to the objection brought against the operation of venesection generally—that in the present state of public opinion as to blood-letting, the discredit of a fatal result is too likely to be hastily assigned to the venesection. Apart from such considerations, however, the general result of an unusually animated discussion will be to direct attention once more to the possible advantages attending the judicious employment of a mode of treatment long condemned as not only useless but dangerous.

Beri-Beri.

A most interesting account of the nature and history of beri-beri is given by Dr. F. B. Sutcliffe in the *Occidental Medical Times*, February, 1891, after observations made in the Sandwich Islands.

Dr. Sutcliffe says: My first patients were Japanese. When I was asked to see them they were under arrest for having refused to work. They claimed to be ill, and the plantation doctor and the overseer claimed they were not. They were arrested, tried, found guilty and sent to the Wailuku jail. They had been driven about twelve miles through the dust and heat—not in a wagon, but a native policeman had ridden his mule, driving them ahead of him. They claimed that he had helped them along with the use of his whip, but I saw no evidence of such treatment, and did not think they were abused in that way. I was asked by the Sheriff to go and see them before they were locked up, as he thought they looked ill. When I saw them I did not know anything of their history. I was asked to examine them and say whether or not, in my judgment, they were ill. I found six of them sitting on a bench, looking worn out and very tired. They all had a temperature above the normal, and a rapid, full pulse. The heart was working hard, altogether out of keeping with the other symptoms. All were complaining of pain in the legs; one or two complained of pain in the chest, putting their fingers under the sternum, and pulling at it as if to lift it out. I, of course, pronounced them ill, but of what disease I only suspected, and refused to make any diagnosis until I had watched them for a day or two. I was then told their history, and I recommended that they be sent to the hospital instead of being put into a cell. I saw them again the same day, and all doubt as to the nature of the trouble was dispelled.

The further development of the disease was very interesting to watch. The legs of all began to swell, and later on this swelling became quite general, in one or two of the worst cases. The day after they were received, three of them were unable to walk without great effort, while the others were decidedly unsteady on their feet. The worst case amongst them assumed the gait and attitude of a child, who, in taking its first unsteady steps, fearing it may fall, puts out its hands as a safeguard, reels on one foot, bringing the lifted foot with undue force to the ground. The gait is peculiar; it seems to be an effort to balance and a false judgment as to distances, rather than a shrinking to ease soreness or pain in the legs or feet. I never saw a patient who seemed in danger of falling backwards; but this may be because, as I have said, they lean forward and put out their hands. The case that I have mentioned as being worse than the others did not improve. Effusion into the chest took place, the heart's action became worse, the kidneys did not perform more than half the work they should, breathing became more and more labored, and death took place in about one week from the time that he was forced to take his long walk to jail. The other patients gradually improved till they were able to leave for Honolulu, at which place I heard that one of them died and the others made a full recovery.

These cases were the most notable that came under my observation. They had been on the island but a short time, the vessel that they came in being still in port. The ship's surgeon visited them, and confirmed my diagnosis; indeed, they knew themselves what the trouble was, and spoke

of it as "kakae," the name they give to the disease.

For the next three years I saw a good many cases of all degrees of severity, though, as a rule, of a mild form, and yielding kindly to treatment. It was a common thing in visiting a plantation to find three or four cases of the disease. Usually the first symptoms of which they complained were swelling of the legs, pain along the tibia and shortness of breath. I would usually find upon examination, palpitation, a quick pulse and marked anemia. My method of treatment was as follows: I changed the patient's diet; where it could be had, milk was largely used, but it was scarce, and the Japanese do not like it. Fresh vegetables were given, and the best of all that we could get was tomatoes. The people most affected were in the habit of eating a deal of rice, salt fish and such oily preparations as the Chinese delight in. Where they could be persuaded to follow out the directions, improvement was the rule from the first, if the disease was not too far advanced when first seen. Occasionally a case would grow worse and have to go the hospital; some would fail to report for treatment after a slight degree of improvement, and, getting worse, come again and again, with the disease in a chronic form.

The drug that I gave oftener than any other was digitalis. I often combined with it the citrate of potash, and when the tongue had cleaned iron was given, and sometimes nux vomica. I was much impressed with the good effect of changing the patient's place of residence, when they were living in a low, wet locality, to a high and drier location. Where this could be done, and when they were well cared for in the matter of diet, the disease was often checked without other treatment. I can recall one case in a woman, a Japanese. She was ill for some time, but finally recovered. She had worked in the field with the men, and was exposed in the same way to like influences. I do not see why the disease should not attack the female, but this is the only case in a woman that I can remember. I never saw a child affected, or a white man, or a native Hawaiian. All my cases were Japanese or Chinese. If Kynsey is correct in his observations of the disease in Ceylon, we must conclude that it differs from that at Hawaii; for the women and children drink of the same water that is supplied to the field hands, and would be just as apt to receive any parasite that it might contain, and as likely to suffer from any disease caused thereby, and this is equally true of the foreigner and of the native.

We have seen that research by those who have had the opportunity of making *post-mortem* examinations has not yielded the results that one might hope to find in a disease in which so many symptoms point to grave changes in the great nerve centres. I think that the paralysis is due to a starved condition of the cord rather than a changed one, and that this condition is due, in part at least to the anemia. The gait, in many cases, is very much like that of ataxia, and I cannot believe with Kynsey, that the embarrassment in this respect is due to the edema of the lower extremities, as I have seen it come on before this was at all marked.

My observation would lead me to conclude that the disease is not as severe in Hawaii as in other countries, and that the worst cases seen there are brought into the country in a more or less advanced stage. While beri-beri is a disease of other lands, we have three cases reported by Dr. Seguin, of New York, in 1888, and I do not see why cases might not be found on this coast almost any time. I have inquired of an intelligent Japanese, of this city, if he had ever seen a case of beri-beri in this country, and he stated he had seen two in San Francisco. This may or may not be so, but to me it seems very probable, for the Japanese understand the disease, its symptoms and its gravity very well.

Chloroform in Tracheotomy.

The *Medical Press*, January 28, 1891, says: A curious fatality attaches to the administration of chloroform in operations on the throat, and this has been noticed more particularly in connection with tracheotomy. So tangible is the risk to which the patient is exposed that it really becomes a question to be seriously discussed, whether the use of chloroform is justifiable under these circumstances. The operation of tracheotomy, when skilfully performed, is short and not very painful, and is most frequently necessary in young subjects, the victims of some laryngeal affection, hence in patients physically well under control. It is, moreover, most commonly performed in order to avert impending asphyxia, and the patient is usu-

ally already suffering from partial deprivation of oxygen, the effects of which are undoubtedly to dull the perception in respect of pain.

On the same subject the *British Medical Journal* (Supplement), January 31, says: M. Geffrier, of Orleans, has recently published (*Revue de Chirurgie*, December, 1890) a paper on chloroform in tracheotomy. The views of this author, which are based on a study of eighty-seven cases, are summed up in the following conclusions: (1) Chloroform is of unquestionable service in tracheotomy on children; (2) its use is not attended with any special danger in this operation, provided that attention be paid to certain contra-indications; (3) the following precautions ought to be taken: (*a*) everything that might be required in the course of the operation should be placed close at hand; (*b*) the administrator, who ought to be experienced in the use of chloroform, should carefully watch the respiration, and, if it be required, excite the respiration by speaking to the patient or by irritating the skin; (*c*) if the state of the respiration become alarming, the inhalation of chloroform should be discontinued at once, and the operation be performed without delay. Extreme asphyxia and prostration from diphtheritic poison are regarded as absolute contra-indications. Marked cyanosis without, and slight cyanosis with impeded expiration are both regarded as contra-indications, though not so stringent as the conditions previously mentioned. Slight cyanosis without obstructed expiration and a very early age are not regarded as contra-indications. In the author's opinion, if the operation be not contra-indicated by the age of the infant, neither will the inhalation of chloroform be contra-indicated.

Hyperemesis and its Treatment with Creasote.

In the *Berliner Klin. Wochenschrift*, December 29, 1890, Dr. Peter Kaatzer has a short communication on the rationale of the treatment of hyperemesis with creasote. He remarks that the therapeutics of this affection have not so far reached definite results. Starting from the supposition that the disease is a reflex neurosis, the narcotics were brought into employment and their achievements praised. According to Eulenburg and Lemaistre, iodide of potash does excellent service. If one holds Kehrer's view, that the obstinate vomiting of pregnancy is occasioned by severe diseases of the stomach, then therapeutic measures must be adopted accordingly.

Kaatzer gives a report of a case in which a woman was thought to be wasting from phthisis. Her sputum contained only a few bacilli, and it came out by and by that the woman was pregnant, and was vomiting after every meal. Kaatzer prescribed creasote, both for the stomach trouble and the phthisis. After taking two doses, the patient ceased to vomit and rapidly recovered. Kaatzer does not know why the remedy did good. The formula used was the following:

℞ Creasoti puriss. . . . . m xxx
Alcoholis . . . . . f℥ i
Tinct. gentianæ . . . . . f℥ iiss
Ext. caffeæ . . . . . ℥ iiss
Aq. destill. . . . . f℥ iii

M. Sig. Shake well. Tablespoonful in milk.

Chromic Acid in Habitual Epistaxis.

In the St. Petersburg semi-weekly *Meditzïna*, No. 51, 1890, p. 413, Dr. Metchislav V. Pogorelsky, of Elisavetgrad, relates three cases of obstinate habitual epistaxis in school boys, in which, following, Dr. Heryng's recommendation, he successfully resorted to cauterizing with crystalline chromic acid, after all ordinary means had failed. In all the three patients, a rhinoscopic examination revealed the presence of a small-sized, sharply circumscribed highly-vascularized area situated on the nasal septum. Only this congested spot was treated with the acid, the application being repeated once or twice a week and always followed by washing out the nasal cavity with a weak solution of chloride of sodium, or bicarbonate of soda, or borax. In two of the cases 4 or 5 *séances* proved sufficient to effect a complete and permanent cure; in the third a few more applications become necessary to obtain the result.

Fissured Nipples.

Scarff recommends for fissured nipples the following application.

℞ Balsami Peruviani . . . . . f℥ ss
Tincturæ arnicæ . . . . . āā f℥ ss
Olei amygdalæ dulcis . . . . . f℥ j
Aquæ calcis . . . . . f℥ ss

M. Ft. Linimentum. S. Apply locally.

—*Journal de Médicine*, January 25, 1891.

THE

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CHARLES W. DULLES, M. D.,

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Make communications as short as possible.

NEVER ROLL A MANUSCRIPT! Try to get an envelope or wrapper which will fit it.

When it is desired to call our attention to something in a newspaper, mark the passage boldly with a colored pencil, and write on the wrapper "Marked copy." Unless this is done, newspapers are not looked at.

The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

CONCEALED ADVERTISEMENTS IN MEDICAL JOURNALS.

For nearly four years the MEDICAL AND SURGICAL REPORTER has steadfastly endeavored to do its share towards elevating the tone of medical journalism in the United States, by rigidly excluding from its pages what are called "reading notices" and every other form of more or less concealed advertisements. It has also made appeals to other medical journals that they would assist in maintaining this standard. It is with great regret that we have observed from time to time that journals issued by wealthy publishing houses have not been willing to adhere to the same principles, and that they have published matter which had been sent by advertisers presumably to many of the medical journals in the United States, and which was certainly sent to the MEDICAL AND SURGICAL REPORTER, and refused admittance to our columns. A recent illustration of this kind was furnished by one of our contemporaries in November, 1890, which contained in its editorial columns an article that the REPORTER had refused to publish, for reasons which we think ought to have kept it out of the columns of a journal which is, on most points, of such high standing. When the Editor of the journal referred to had his attention called to this occurrence, he made a courteously worded reply that the editorial pages of his journal "are not purchasable," and that it never publishes anything referring to a special remedy "unless the article possesses something of scientific interest."

"With this," his letter concluded, "we will drop the subject." Now this the REPORTER regretted, and it also regrets to see in a recent issue of the same journal, a long article, which we presume was sent to the Editor—as it was to the Editor of the REPORTER—by one of our most valuable advertisers. Exactly five hundred powerful advocates pleaded with us that this article was "of scientific interest," but we wrote to the advertiser stating our rule and declining to relax it.

As the REPORTER remarked long ago, in speaking of this subject, we can understand how medical journals which have a hard struggle to maintain their existence may yield to the pressure of advertisers; but we cannot understand how journals which are supposed to be prosperous and strong, can publish, in columns supposed to be devoted exclusively to scientific matter, articles which are prepared for them by advertisers, and which are themselves most palpable advertisements. The rule of the REPORTER in this has been invariably to refuse this sort of matter, taking the ground that its Editor is unwilling to assume so much for his intelligence and his conscientiousness as that he could enter upon so dangerous a course without risk of error on his part or deception on the part of his readers.

We wish that all the medical journals in

the country would adopt this principle—if it be admitted to be a correct one—or, at least, that the strong journals should not do what makes it harder for weaker ones, which would like to do right, to resist a very urgent form of temptation.

FILARIA SANGUINIS HOMINIS.

The occurrence of the conditions known as chyluria, as elephantiasis, and as lymph-scrotum has long been recognized. It is, however, only within comparatively recent years that their common etiological relation has been established. Wucherer, in 1866, found microscopically in the urine of a patient with chyluria a number of minute worms. In 1872, Lewis discovered the same parasites in the blood of man, and gave to them the name *filarila sanguinis hominis*. These were taken to be the embryos of a nematode or round worm, the parent being first detected by Bancroft, in 1876. The literature on the subject has grown to considerable proportions, other contributors having been Manson, Cobbold, MacKenzie, Leuckart and recently, Guitéras, Mastin and De Saussure.

In the *New Orleans Medical and Surgical Journal*, for January, 1891, Dr. Rudolph Matas reports a case of chylocele into the vaginal tunic of the testicle, due to the presence of *filaria sanguinis hominis*, and reviews at length the whole subject.

The parasite is found principally in the tropics, in Brazil, in Egypt, in the Indies, in China, in Australia. It has been found in isolated cases in the Southern United States. The fully developed worm is from three and a half to four inches long, and about a hundreth in diameter, while the embryo is about one hundredth in length and one thirty-two-hundredth in diameter.

The mature worm gains entrance into the human organism with the drinking water. It bores its way through the wall of the stomach or bowels into the lymphatic system, at some point of which it becomes intercepted and here propagates its offspring. These are carried by way of the thoracic duct into the general circulation, in which they can be detected during the periods of rest ordinarily at night, but by day if the patient is active by night and rests during the day. The embryos may circulate in the blood still enveloped in their capsules or they may be set free. In the former condition the ova are too large to pass through the lymphatic system, and are somewhere detained, giving rise to lymph stasis in the circulation behind them.

In this way, depending upon the location of the obstruction, the various conditions of chyluria or hemato-chyluria, chylous hydrocele, lymph-leg or lymph-scrotum may arise. It seems not impossible that effusions into the serous cavities may take place, occasioning chylothorax or chylous ascites. The embryos do not attain mature development in man, but for this require the intermediation of another host. This office is performed by the mosquito. In its depredations, with the blood it removes, it also carries away some embryo filariæ. The mosquito having hatched its own ova, dies and deposits both these and the now maturely developed filariæ upon the water.

Individuals harboring the filaria may enjoy a fair degree of health, notwithstanding the local manifestations. The condition may exist for many years, even beyond fifty. It is not itself directly fatal, except by its complications. Recovery is the rule and may be spontaneous. As the disease has its home in warm climates, removal to colder regions may suffice to effect a cure. The prophylaxis thus becomes a most important matter.

The danger is less from running water, from that obtained from springs and artesian wells, and greater from still water, in reservoirs, cisterns or tanks. In places in which filariæ are known to abound, the water should always be boiled. Filtering or straining alone ought not to be relied upon.

DIGESTION FOR ABSCESS CAVITIES.

At the last meeting of the Medical Society of the State of New York, Dr. Robert T. Morris, of New York, in a paper on the action of trypsin, pancreatic extract and pepsin upon sloughs, coagula and muco-pus, stated that the surgeon's resources were materially enlarged by adding the digestive ferments to his armamentarium, and with them liquefying putrescible material, like the lining membrane and lymph coagula and necrotic tissues of tuberculous abscesses.

He stated that, contrary to the presupposed ideas, pepsin is the best liquefier. This material, which is perfectly harmless in any proportions, can be best used in a ten per cent. solution in water, acidulated with one per cent. of hydrochloric acid. The patient should assume a position favorable for the retention of the solution, and at the end of an hour the liquefied dead tissues may be washed out, and the cleaned abscess may be then easily sterilized with peroxide of hydrogen.

Pepsin, Dr. Morris said, will liquefy dead tissues in the deepest recesses of tuberculous abscesses, and its action is ended abruptly as soon as it reaches tissues through which blood is circulating. Various conditions of disease tissue suitable for pepsin treatment were referred to in Dr. Morris's paper, and he was inclined to expect some advantage from association of the method he advocated with the use of Koch's "lymph;" for he took it as demonstrated that Koch's lymph would loosen and throw out masses of necrotic tissue, and that these could then be reached with pepsin and peroxide of hydrogen—giving the surgeon an ideal group of materials represented by three P's—paratoloid, pepsin and peroxide of hydrogen.

The first part of Dr. Morris's suggestion we think deserves careful consideration. That is, that the solvent power of pepsin upon dead albuminoid matter may be utilized with advantage in the treatment of tuberculous abscess cavities and sinuses. The idea is not a new one but it has never been carried very far as yet; and we commend it to the notice of the readers of the REPORTER, for its simplicity and ease of execution.

BOOK REVIEWS.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the REPORTER.]

LEHRBUCH DER KLINISCHEN ARZNEIBEHANDLUNG. Für Studirende und Arzte. VON DR. FRANZ PENZOLDT, Ordentlichem Professor und Oberarzt der Medicinischen Poliklinik zu Erlangen. Zweite veränderte Auflage. Jena: Verlag von Gustav Fischer, 1890. Royal 8vo, pp. xxii, 268.

TEXT-BOOK OF CLINICAL THERAPEUTICS. For Students and Practitioners. BY DR. FRANZ PENZOLDT, Professor Extraordinary and Physician in Chief at the Medical Polyclinic at Erlangen. Second revised edition.

The first edition of this work is dated June, 1889, the present, the second, April, 1890. The book seems to have supplied a want in the German medical profession. A good deal of consideration has been given to the most recent drugs, some of which, it is true, have already proved themselves valuable medicinal agents, while, of others, the utility is, as yet, at least doubtful. The arrangement of subjects is somewhat different from that to which English readers have become accustomed since the advent of the physiological method in the study and administration of remedies. Two great divisions are made: inorganic medicaments and carbon compounds. Under the former are presented metals and non-metals; under the latter, in many subdivisions, the remainder of the subject. The topics are discussed with regard to the characters and properties of the drugs, as to their physiological actions, their toxicology, their therapeutical applications and their diagnostic value. Many of the opinions expressed are at least not generally accepted among us, if not at variance with our views, while some therapeutical applications of considerable importance are quite ignored.

Of bismuth it is said: "Despite its ancient reputation, its therapeutical utility in various directions is not above doubt." It is not thought to be efficacious in gastric ulcer. "Only in certain cases of chronic diarrhœa, given in large doses, have certain otherwise skeptical observers reported good results." It may be easier to treat acute and subacute attacks of gastro-intestinal catarrh, with nausea, vomiting and diarrhœa, by means of opium, but bismuth is certainly the safer remedy. Chloroform is said to be less dangerous as a general anæsthetic than ether. Antipyrin is described as having almost a specific action in acute articular rheumatism.

The general indication for the administration of digitalis is persistent cardiac weakness and its consequences. The most important question is: Is the arterial tension subnormal? Such a condition is usually associated with a small, irregular or frequent pulse, but not necessarily. The pulse may be regular and infrequent, yet digitalis may be indicated. The utility of digitalis consists in the restoration of the ruptured compensation, the removal of the œdema, of the cyanosis and of the dyspnœa.

Strychnine, it is said, may do good in certain am-

blyopias and amauroses, but it has no other significant therapeutic value. Strychnine is one of our most reliable and active cardiac stimulants, and is useful as a tonic in asthenic conditions. Nor is atropine given a therapeutical place as a prompt and efficient cardiac stimulant.

The claims of gelsemium as a remedy for neuralgia, especially of the inferior maxillary type, are rejected. The only indication given for the use of pepsin is total absence of the gastric ferment, such as occurs in atrophy of the mucous membrane of the stomach. Even in these cases, its utility would be doubtful because of the lessened absorptive activity of the mucous membrane. The good results obtained in erysipelas by the use of pilocarpus and pilocarpine are not alluded to. The preparations of aconite are said to be not useful. The administration of aconitine in neuralgia cannot be recommended.

The work may be a true reflex of German therapeutics, but it presents many variations from our own. We have only noted some of the most striking differences.

ŒUVRES COMPLÈTES DE J. M. CHARCOT. Hémorragie et Ramollissement du Cerveau; Metallothérapie et Hypnotisme; Électrothérapie.

COMPLETE WORKS OF J. M. CHARCOT. Hemorrhage and Softening of the Brain; Metallotherapy, Hypnotism and Electrotherapy. Volume IX. Thirty-four illustrations and thirteen plates. 8vo, pp. viii, 571. Paris: Office of the *Progrès Médical*, 1890. Price, 15 francs.

This volume contains Prof. Charcot's writings upon cerebral hemorrhage, which he believes to be due, in the majority of cases, to miliary aneurisms of the small arteries of the brain. Abstracts of eighty-seven cases are given in support of his opinion. As regards softening of the brain, he accepts the view which attributes the softening to an alteration of nutrition following upon embolism, atheroma or thrombosis. There are also important papers on joint-diseases apparently due to diseases of the brain and cord. The second part of the book is devoted to metaloscopy, metallotherapy and hypnotism. In the third and concluding part, Prof. Charcot speaks of electrotherapy, and especially of the use of static electricity in medicine.

The whole book is a mine of information, and will prove invaluable to students of nervous diseases.

Notes and Comments.

Congenital Occlusion of the Urethra.

An interesting example of congenital obstruction to urination is given by Dr. James Adams, of Eastbourne, in the *British Medical Journal*, January 31, 1891. Dr. Adams says: My attention has been directed to this rare condition by a case which occurred in my practice in October, 1889. I attended a confinement, and after a natural labor a male child was born at full term, who was well formed, and in every respect apparently normal, except he was the subject of hypospadias. Two hours afterwards I was sent for to see the child, because the nurse, who was a trained and intelligent woman, thought something was wrong, as the infant, although he had been bathed and dressed, and had passed a motion, had not micturated. The meatus was patent, so I tried to pass a small blunt silver probe down the urethra, but it would go only a very short distance. I directed the nurse to give the child a warm bath and keep him in the water for fifteen minutes, and to repeat the bath two or three times during the next twelve hours if no urine passed.

The next morning, fifteen hours after birth, I found that no urine had been passed and the child was beginning to be restless and uneasy, but without symptoms of distress. I again tried to pass, with all gentleness, the silver probe, and failed to get it further than the previous attempt. I now took a small French catheter, and that seemed to be brought up at the same distance from the meatus. Being a non-metallic instrument, I used as much force as it would bear, but did not succeed in getting beyond the obstruction. I withdrew the catheter and tried again, and this time succeeded in penetrating what I believe to have been a thin membranous structure which was occluding the urethra. The urine came freely through the catheter, and I had no further trouble with the case.

It is open to remark that the urethra might not have been occluded, being merely narrowed by a congenital stricture, or that the urethra was of normal caliber, and that its sides were agglutinated by inspissated secretion. While I am unable to disprove either of these opinions, I may say that had it been a stricture I should have expected subsequent trouble, and had it been the other condition I should have expected the hot baths externally, and the effect of the warm urine internally on the vesical side of the obstruction to have caused its disappearance. Another point tending to support my view that it was an organic occlusion of the urethra is the fact of the infant being a hypospadian, showing some developmental abnormality of the mesoblast in this region. And in a case of congenital occlusion reported by Mr. Forster, of Darlington, in the *British Medical Journal* of January 3, 1885, the infant was also the subject of hypospadias.

The only other instance I have met with of this condition was in 1878. This was a

premature child, born at seven mouths, and a weakly specimen for that age. I was unable to pass a probe or catheter, and the child died forty-eight hours after birth, never having passed any urine. The child was too feeble to bear any further surgical proceedings, even if the parents would have consented.

The literature of this subject is very scanty, and in several of our English text-books no reference is made to it. American works contain the fullest account of it, and I quote the following by Professor Duplay from *The International Encyclopædia of Surgery*, edited by John Ashhurst, M. D.:

"These occlusions, which result from gluing together of the two corresponding halves of the penis, may occupy any point in the canal, but the meatus urinarius is the seat of election. Sometimes the mucous membrane of the glans is seen to pass in front of the meatus without anything being seen at this point which could indicate the existence of an orifice. . . . Most frequently the meatus is well formed, and ends in a *cul de sac* at a distance of a few millimeters. We have only a very small number of examples of occlusions situated at other points of the canal. The diagnosis is especially easy when the occlusion is in the meatus or in the fossa navicularis. Deeper occlusions may escape the first examination, but the effectual effort of the infant to urinate, and sounding with a curved stylet or very small catheter will usually render error impossible."

I will also give the short description found in Gross's *Surgery:*

"The most common of these congenital vices are first closure or contraction of the meatus; and, secondly, absence, contraction and change of form of the urethra. Occlusion of the external meatus always demands prompt interference. When it is caused simply by a duplicature of the lining membrane forming a sort of hymen, a vertical incision in the direction of the natural outlet is generally all that is required, the edges of the wound being kept asunder by means of a bougie. When the imperforation depends upon the presence of fibrous tissue and reaches a considerable distance back, the operation will be more serious, and will require to be performed with a trocar."

The diagnosis in these cases is easily made, for the subjects are newly-born infants who are unable to pass water, and if the obstruction is at the meatus the condition is at once recognized, and if the obstruction is further down the urethra, the use of the catheter makes it evident. If the surgeon is unable to penetrate the obstruction by means of a soft catheter, he cannot judge how far the occlusion extends between the point where the catheter is brought up and the bladder, as it may involve the whole of that portion of the urethra, or only a small part of it.

On the question of treatment the proper course to adopt is clear where the occlusion consists of a membranous veil covering the meatus. This veil must be incised, and the orifice kept patent by passing a bougie daily for a week or ten days. Also in cases similar to mine, where a non-metallic catheter can be with moderate force thrust through the soft and easily lacerable membrane occluding the urethra, this treatment is clearly the one to follow; but in those still rarer cases where the urethra is obliterated for some distance, it appears to me there presents itself to the surgeon a most unfavorable condition to deal with satisfactorily.

Three courses are open, namely (1) forcing a passage by means of a curved stylet, or small curved trocar and canula; (2) perineal cystotomy; (3) suprapubic puncture. The objection to forcing a passage is that it is an unsurgical and hazardous proceeding, and that you are working in the dark and have no guide to rely on. If you reach the bladder so much the better for your patient, for your treatment saves his life and leaves him with a urethra in its normal position.

Another agument in favor of this course is that it has been adopted with success, notably in the case mentioned above, where the urethra was said to be wholly obliterated. With regard to perineal cystotomy by the median method with the finger in the rectum, the distance to reach the bladder is short, and as it would be distended, one would feel more certainty of finding it than by the first plan. But I should give the preference to suprapubic puncture by small trocar as being simplest and safest, and I should fix in a rubber catheter and wait upon events. Afterwards, when the child was old enough, the suprapubic opening might be enlarged, the bladder explored, and a passage made from its interior by means of a curved trocar and canula as near along the normal position of the urethra as could be ascertained.

Medical and Social Aspects of Abortion.

At the Third General Meeting of Russian Medical Men at St. Petersburg, Dr. Natalïa V. Thalberg, a woman doctor of Kïev, read a communication (*Proceedings*, No. 8, 1889, p. 256) on criminal abortion, and a rational struggle against that steadily progressing social evil. She says that a considerable number of cases of artificial abortion give rise to grave and permanent disturbances in the woman's health, not unfrequently ending in death. Both in Western Europe and also in Russia, criminal abortion has at present attained great dimensions and manifests unmistakably a harmful influence on the health of the population. A truly regretful circumstance is the increasing assistance in the matter rendered to women by the members of the medical profession; and its ill-effect is enhanced by the fact that often medical art proves powerless to obviate the injurious effects of the abortion it produces, due especially to a hasty and clumsy performance of the operation, and also to the violation of elementary rules of precaution during the after-period. Apart from austere views entertained by modern society in regard to an extra-matrimonial pregnancy, and from increasing poverty, the main causes of a progressive increase of abortion are: defective moral and mental education of women, and woman's ignorance of the criminality of abortion, and especially of its harmful effects on her own health. An indirect but still powerful cause of the spread of abortion is found in the defective sense and principles of those members of the medical profession who render their assistance in the matter.

In view of these facts, a rational struggle against the evil demands joint action by the authorities and by the medical profession. The initiative in the matter belongs undoubtedly to the profession, since the medical man, whom both married and single women solicit to procure abortion, knows best the consequences of its performance. Hence, an imperative duty arises for the profession to draw the attention of the community to the evil, to elucidate its causation, and to find out effective means for its prevention.

Dr. Thalberg suggests the following measures to restrict criminal abortion: 1. To reduce to the lowest point possible the legal punishment of women who have abortions performed, since severe laws have not served to prevent them from undergoing the operation, while they act powerfully in restraining them from denouncing the abortionist. 2. To disseminate knowledge of the injurious effects and dangers of abortion, by means of pamphlets, public lectures, etc. 3. To establish numerous lying-in hospitals and homes for foundlings all over the country. 4. To promote the education of women tending to elevate their mental and moral level.

[Our Russian translator suggests that we may take the liberty to express doubt in regard to the actual degree of effectiveness of measures proposed by Dr. Thalberg. Obviously, her measures are nothing else than mere palliatives. However humane, they do not touch in the least the cardinal etiological factors of the social evil. Those factors are (1), in Russia, an appallingly progressing wholesale pauperism which, on one hand, makes the establishment of a "legal" family less and less accessible, because of its expensiveness; and, on the other hand, converts the appearance of every child into a true disaster, and (2), the ethically immoral moral codex of the modern "civilized" community, which sentences to social death every unhappy woman who, having no possibility or opportunity for establishing a "legal" home, gives way to temptation to the performance of her sexual functions. He says that only those measures can prove effective against the slaughter of intra-uterine children, which honestly and courageously strive to improve the economical conditions of the community and to humanize the moral codex of the latter. None of the great social evils undermining the modern community can possibly be remedied by moralizing or by legal and hygienic trifles which leave intact the essence of the matter.]

Country Practice.

In the *Medical World*, March, 1891, there is a letter from Dr. George R. Robbins, of Hamilton Square, N. J., which gives a description of some of the experiences of a country practice, which we are sure will be read with interest and sympathy by many of the subscribers to the Reporter.

Of obstetrical work Dr. Robbins, who has been in practice twenty-one years, says: "You will be taught not to approach an obsteteric case without fortifying yourself with

an armful of instruments, carbolized silk to tie the cord, bichloride for washing hands, iron, ergot, chloroform, morphine, turpentine, quinine, etc.—a whole bagful of bottles—all good. They will serve you if you have the money to buy them. I have attended cases of confinement after waiting for hours asleep in a wood-box behind the stove; not a rag to dress the child; tied the cord with a piece of my shoe-string, cutting the cord with an old rusty butcher knife, all with good results.

"Imagine yourself summoned to attend a case of labor. You approach the house with your grained leather obstetrical bag, containing forceps, craniotomy instruments, blunt-pointed scissors, spring lancet, carbolized silk, absorbent cotton, drugs as enumerated above, etc. You enter the waiting room, carpeted with brussels, with velvet plush reclining chair, with foot-rest before the grate. You are informed that you are the sole possessor of that room when not required in the adjoining one. At the proper time you approach your patient, notice all silk-lined paraphernalia for little 'teetsy-weetsy,' with all kinds of powders, puffs, pastes, etc. When your blessed one is comfortable you are furnished with warm diluted Florida water and bouquet soap to wash with, and May-bloom to complete your toilet. Splendid. But you may thank your stars if you do not get your sleep in a wood-box, and after the earth has been gladdened with that familiar 'squall,' go down to the ditch and wash your hands the same as I have done. I have made my splints for fractures from barrel staves, shingles, cigar boxes, leather, pasteboard, anything. I performed my first craniotomy alone, delivering the child, weighing sixteen pounds, saved the mother, all with a jack-knife, which I borrowed from the woman's husband, and my tooth forceps. Why did I do it with these tools? Because I had no proper instruments and was too poor to buy them at that time."

New Method of Detecting Tubercle Bacilli.

The *Lancet*, February 7, says: Dr. Biedert, of Hagenau, in Alsace, has devised a new and considerably surer method for the discovery of tubercle bacilli in sputum. He collects a tablespoonful or more of the sputum, mixes it well with a glass rod, takes some of it and stirs it together with two tablespoonfuls of water and four to eight drops of solution of caustic soda according to the density of the sputum, and then boils it, stirring it the while in a shallow cup, gradually adding four to six tablespoonfuls of water till he gets a pretty thin fluid mass. This he allows to stand for two hours in a high glass tapering as finely as possible downwards, and all the formed particles sink with the tubercle bacilli to the bottom. Then he pours off the fluid, retaining the sediment, parts of which he takes out with a platinum needle and rubs them fine on a cover-glass. When the preparation is dry he passes it through a flame, stains it with a carbolized solution of fuchsine, and then bleaches it with 25 per cent. sulphuric acid. If there are any tubercle bacilli they remain red, and are thus distinguishable under the microscope. Even a single bacillus is discoverable in this way, whereas the older methods yielded a positive result only if there were many.

Trained Nurses.

In an address delivered before the Boston City School, an abstract of which appears in *The Nightingale*, January 31, 1891, Dr. Chas. M. Green makes some timely remarks upon the duties and conduct of the trained nurse. He says:

The nurse's duty to the patient consists chiefly in faithfully carrying out the physician's directions, in accordance with her previous training, unless the doctor specifies other methods.

The nurse's manner in the sick-room should always be cheerful and hopeful. No matter how grave the case, she should never betray in her face or manner the anxiety she may feel. She should hold no long or whispered interviews with the physician, or members of the family, within sight or hearing of the patient: such conduct always excites suspicion in the patient's mind that his case is not progressing favorably, and deepens the forebodings which patients are prone to cherish. She should never announce in the sick-room the patient's temperature, or give other information about the case than that which is favorable and encouraging. Her report to the physician should be made in an adjoining room. Startling news or private grievances should never be made known in the sick-room. All medicines and other appliances of the sick-room should be kept in an adjoining chamber; but if this is impossible, they should be neatly ar-

ranged upon a table, and perhaps hidden with a screen; some patients have a horror of gazing upon the cups, bottles and spoons, which remind them of their condition.

Unless the continued presence of the nurse is necessary in the sick-room, she should leave the physician alone with the patient during a part of his visit. There may be some confidences between patient and doctor which it is desired she should not share. When members of the family visit the patient, if that is allowed, the nurse should withdraw for a time, for obvious reasons; this will give her time for rest and relaxation, and the patient an opportunity for a few minutes' privacy with his family.

As the patient enters upon his convalescence, he usually begins to take a lively interest in what he can eat, or he may be led to do so. Then the nurse has an opportunity to use her taste in the serving of his food; for we all know how much better everything tastes when it is daintily served.

Above all things, the nurse should not gossip. Patients will often listen with the greatest interest to what she may say of other cases and people, and then wonder afterwards whether she will not, at her next case, portray the scenes of their sick-room. A high-minded nurse should remember that she has no right to trifle with the sacred confidence of the sick-room, or carry beyond its walls the private affairs which have necessarily come to her knowledge. The nurse should not at first seek to displace from the sick-room members of the family who are in attendance upon the patient; they are often loath to give up one dear to them to the care of a stranger, and unwilling to be directed by the nurse. She should, therefore, manifest her willingness to assist them, and gradually they will perceive that she is far better fitted than they for the duties of the sick-room, and will gracefully yield to her the position which it is her province to occupy. A nurse should be willing to go beyond the limits of her legitimate work, if she can do so without neglecting her proper duties. It always pays to be obliging in every walk of life; and the nurse who is willing to wash some needed article of dress, to bind up a sore finger, mend a broken shoe string, or sew on a button, will be popular in any household. All that has been said about gossiping in the sick-room applies with equal force in the household. Family secrets will necessarily come to the knowledge of the nurse, and she should guard them as religiously as those of the patient; her duty in this respect is the same with that of the doctor.

The nurse will generally be asked where she wishes to take her meals; the reply should be: "Wherever it is most convenient to the family," adding, "in the dining-room, after the family is served, if it is agreeable." If the family breakfasts late, however, she may ask to have her breakfast earlier. It is probably not agreeable to the nurse to eat with the family, even if she is asked to do so; and if so asked, it would be right for her in a quiet way to mention one of the many reasons why she had best not do so. When the patient is very sick, it may be necessary that the nurse should be served on a tray in an adjoining chamber. Sometimes the nurse is expected to eat in the kitchen. It is well to advise the family that it is best that the nurse should be in the kitchen as little as possible; and that if she has to eat with the servants, it will be hard for her, without giving offense to them, to remain loyal to her duty in respect to the secrets of the sick-room. When, however, the nurse's duty takes her to the kitchen, perhaps to prepare some article of food for the patient, she should always greet the servants kindly, and assume no superiority. A nurse can, by her gentleness and tact, so win the regard of a large corps of servants that they will almost bow down and worship her. Such a nurse is never without engagements, and does much to increase the demand for trained nurses in the community.

Control of Sources of Water Supply.

The *Engineering Record*, February 14, 1891, says:

The question of the control of sources of water supply is one of great and increasing importance, and the necessity of obtaining an abundant supply of pure and wholesome water for household use is a universal one. In sparsely settled districts of this country, or in small communities, it is usually an easy matter to obtain it from local springs or properly located wells. But when small communities have grown into towns, and towns into cities, many difficulties are encountered. Local sources of supply become contaminated, and the demand being a large and concentrated one, the supply frequently has to be sought at considerable distances. Even then, especially in the more thickly

settled portions of the country, it requires constant care to keep the sources of supply free from defilement.

The right to the use of water for the supply of cities and towns must necessarily take precedence over all individual or corporate claims to ownership for manufacturing or other purposes, and it is generally the case that communities, seeking a public supply, are authorized by State legislation to acquire, by the right of eminent domain, any water that may be needed for this purpose, paying, of course, for all damages sustained by mill owners or riparian proprietors from its appropriation or diversion.

With the danger of this constantly increasing demand producing a scarcity of wholesome water available for city uses, it seems important that some steps should be taken to guard against undue appropriation of sources of supply by one city, far beyond its present needs, and at the expense of other cities in the same State; and still more against the monopoly by syndicates of all desirable sources of supply in a State or district, for the purpose of "making a corner" in water and compelling the cities to buy of them, in one form or another, at a greatly enhanced cost. We have constantly advocated the desirability of cities owning their own systems of water supply when practicable; still we have been willing to acknowledge that there are cases in which private ownership is admissible, since otherwise, for various reasons, the construction of the works would be indefinitely postponed—and a private supply is certainly better than no supply at all. The legal incorporation, therefore, of a private company for supplying water to a given place, endowing it with the necessary powers to accomplish this object, is not a subject of criticism.

This, however, is quite a different matter from the incorporation of a company with *general* powers to appropriate *all* the water supplies of a State, and to furnish more or less water from them to any places it may see fit to contract with for this purpose. It is very questionable if the purchase of the mill powers of a stream or the shores of a lake or pond by such a corporation entitles it to the absolute ownership of the water for any other purpose. In any case, it would certainly seem as if a city should have the same right of condemnation of water for its necessities against any such corporation or syndicate, as against any private parties, and that, moreover, it should not be compelled to pay any fancy price for it—any more, in fact, than the actual damage which its diversion may cause to manufacturing or riparian interests. Speculation in land, which, it is expected, a city or State may have to condemn for its own use, seems to be an unavoidable evil; but no good reason can be advanced why a private corporation, for the same speculative purposes, should be permitted to monopolize water supplies by granting it the same absolute ownership therein as in lands.

This question of the control and conservation of water supplies has been exciting a good deal of interest recently in the State of New Jersey, and Governor Abbett seems to fully appreciate its importance, as is indicated by his recent message to the Legislature.

Parasitic Chylocele in New Orleans.

The filaria sanguinis hominis is a curious parasite which has been proved to be the cause of chyluria, chylocele and elephantoid affections of the scrotum and lower extremities. These diseases are relatively common in the East Indies, and are met with in the West Indies and South America. Dr. John Guitéras, Dr. William Mastin, and Dr. De Saussure have also reported cases occurring in the South Atlantic and Gulf States, especially in Charleston, S. C. Dr. Rudolph Matas adds another case to the comparatively short list in a paper published in the *New Orleans Medical and Surgical Journal*, January, 1891. The case is interesting as an instance of accurate clinical diagnosis, subsequently confirmed by pathological study; but it also shows that the filarial diseases may in future become common in that part of the country. For while the patient was a native of Cuba, and in all probability became infected there, yet he had lived in New Orleans nine months before he came under observation for chylocele of the testicle. This fact of course proves that the climatic conditions of New Orleans, as those of Charleston, are well adapted to the development of the filaria. In Dr. Matas's case the embryos of the filaria were found in the chylous fluid from the testicle and also in the blood.

Dr. Matas reports his case with great care, and adds much to the value of his paper by giving a very interesting account of the first discovery of the filaria, its life history, and of the diseases caused by it, with a few re-

marks on prognosis and treatment. When the adult female parasite can not be discovered, and usually it can not, Dr. Matas thinks the most important therapeutic measure is removal to a cold climate and a high altitude. Such a radical change in the environment of the best gradually brings about the destruction of the parasites.

Relationship of the Diseases of Animals to those of Man.

The *Medical Press*, January 28, 1891, says: The discussions which have recently taken place as to the causation and prevention of tuberculosis, have invested with a peculiar interest the question of the relations of the diseases of the lower animals to those of man. The subject is one to which attention has not been long directed, but even at this early stage, it bids fair to add considerably to our knowledge in respect of the prophylaxis of certain transmissible diseases. The matter, as a whole, has been assigned a special section in the Congress of Hygiene which is to take place in London in August next, and the section will take into consideration, *inter alia*, the infectious, contagious, parasitic, and other diseases communicable from animals to man, and *vice versâ;* the methods of the propagation of diseases affecting mankind by means of animals and animal products; the infection of meat, milk and other comestibles; and the restrictions to be placed upon the sale of infected food and the movements of infected animals. On each of these questions papers will be obtained from the highest British and Continental authorities as the basis of the debates, which ought, therefore, to prove exceedingly instructive and interesting. Though less attractive, the prevention of tuberculosis and kindred diseases is vastly more important than their cure, and promises very much more satisfactory results.

Infectiousness of Croupous Pneumonia.

In the *Bolnitchnaia Gazeta Botkina*, No. 29, 1890, p. 714. Dr. Nil I. Sokoloff, senior house physician to the Alexandrovsky Pavilion Hospital, St. Petersburg, publishes a valuable paper in which he brings forward the following several propositions. 1. Croupous pneumonia represents, most undoubtedly, an infectious disease, which (in hospitals) spreads from man to man very much in the same way as erysipelas. 2. Patients suffering from typhoid, typhus and relapsing fevers manifest a quite peculiar predisposition to catch the infection. 3. The mortality amongst such patients contracting pneumonia is truly enormous (about 65 per cent.). 4. In view of the fact, all hospitals should be furnished with special wards for pneumonic patients. 5. As soon as a typhoid patient, when staying in the hospital, develops signs of pneumonia, he must be at once isolated, and the ward most strictly disinfected. 6. No ward which has been occupied by pneumonia cases can be subsequently used for other patients without a preceding thorough disinfection. 7. In view of a generally high mortality from pneumonia (amounting to 12 per cent. under best management of the cases); and of the infectiousness of the disease, the appearance of an epidemic of croupous pneumonia in the town given should always constitute an imperative indication for adopting strictest general sanitary measures. 8. Every one and all of hospitals should keep special isolation wards for admitting diagnostically obscure cases of infectious affections.

Hemoglobinuria from the Use of Quinine.

Dr. Coromilas, of Calamata, Greece, in the *Journal de Médecine*, January 25, 1891, reports six cases in which hemoglobinuria repeatedly followed the administration of quinine. None of the patients could take the sulphate, two could not take cinchona in any form, one not the salicylate, one not the valerianate, one not the hydrochlorate of quinine, without the occurrence of hemoglobinuria; while two could take cinchona, and one of these the salicylate of quinine also with safety.

RESOLUTION.

WOMAN'S MEDICAL COLLEGE OF PENNSYLVANIA.

PHILADELPHIA, PA.

Dean's Office, Feb. 21, 1891.

Resolved, that the Faculty of the Woman's Medical College of Pennsylvania approves of the present bill of Hon. Frank M. Riter to establish a State Board of Medical Examiners and Licensers.

CLARA MARSHALL, *Dean.*

MEDICAL AND SURGICAL REPORTER

No. 1777. PHILADELPHIA, MARCH 21, 1891. Vol. LXIV.—No. 12.

Clinical Lecture.

MALIGNANT DISEASE OF THE PELVIS IN A GIRL UNDER FIFTEEN YEARS OF AGE.—OPERATION.[1]

BY WILLIAM GOODELL, M. D.,
PHILADELPHIA.

Gentlemen: To-day I have a case for operation. We have been preparing the instruments while the patient is being etherized. I have in this tray fifteen of the smaller hemostatic forceps and four of the larger. These numbers have been written down on a piece of paper. In addition, I have one knife, one teneculum, one grooved director, scissors, aneurism needle and a needle holder. These I do not put down, because they are invariably present, and they are not likely to get into the abdominal cavity. We have also marked down the number of sponges which we have. There are nine. It is very important to keep the record of these articles, for I have collected some thirty cases in which a sponge or a forceps has been left in the abdomen. I shall not soon forget the great distress and anxiety I had after an operation some years ago. I went into the country to perform an ovariotomy, and having no skilled assistant I had to supervise everything. I thought I had the number of sponges impressed upon my mind, but after the operation was over I had forgotten their number, and I was unable to say whether I had all the sponges or not. All that night on the train I was kept awake by my anxiety in regard to this point. I knew that when I got home I should be able to tell by the number of sponges which remained in their jar. On arriving, I was greatly relieved, indeed delighted, to find that I had them all. Since then, I always make it a point to write the number down.

Here is the patient, a girl not yet fifteen years of age. Last January she noticed that she was larger than she should be. Menstruation has gone on regularly. I happened to be in the town where she lived, to perform an abdominal section, and her physician asked me to see her. I examined the case carefully, and made up my mind that she had a tumor, which probably was malignant. Of course the question of pregnancy was not overlooked. I examined the breasts, vagina and cervix uteri carefully. I found the hymen present. But that would not exclude the idea of pregnancy; for there are many cases on record in which a hymen has been unruptured, with perhaps only a pin-hole opening, and yet pregnancy has occurred. Day before yesterday I examined her with the sound, and found the womb absolutely immovable. It is pushed against the pubic bone on the left side and flattened. The tumor comes into the vagina as far down as Douglas's pouch, so that I am afraid we have pelvic adhesions. It perhaps is an intra-ligamentary cyst that has formed between the layers of the broad ligament. Such a tumor as this cannot escape upward; and it grows downward, dissecting off the peritoneum from the pelvic cavity. In these cases of apparently firm fixation from adhesions, however, I have sometimes been agreeably disappointed. I have found that the tumor was retained in the pelvis simply by the suction from close contact with the pelvic walls. When boys, you have seen heavy stones lifted with a wet piece of round leather to which a string was attached. The wet leather is pressed upon the stone and is kept in firm contact with it by asmospheric pressure through the vacuum under the leather. This is sometimes the case with these tumors. They are held down in the pelvis by this kind of suction and not by

[1] Delivered at the Hospital of the University of Pennsylvania.

adhesions. Fearing, however, that we may meet with bad adhesions I have the Paquelin cautery ready, and have asked Dr. Taylor to supervise it. The abdomen has been thoroughly cleaned, and scrubbed, and washed with the antiseptic solution.

There is evident fluctuation in this tumor, which is irregular in shape. After estimating the thickness of the abdominal wall by grasping it between my fingers, I make the incision. I do this boldly, because I am sure that there are no intestines in front of the tumor. Reaching the recti muscles I search for the line of junction and at once come down upon the præ-peritoneal fat. Checking the bleeding with forceps, I raise the tissue with two other forceps, and open it by cutting between them. Then I come to another layer, which I catch up and incise in the same way. This opens the peritoneal cavity and exposes the tumor, which has the appearance of a malignant growth. As it is evident that we shall have bleeding, I enlarge the abdominal incision freely, in order to have working room. The walls of the tumor are extremely thin, and the least manipulation causes them to burst; and you see that the thick substance which is escaping resembles cerebral matter. To the upper portion the omentum is attached. This I separate and catch temporarily. Here is the left Fallopian tube spread out over the growth. As I try to turn out the tumor it breaks at every point. The growth involves the whole broad ligament, and it is very difficult to detach it. In order to get rid of the attachment of the omentum at the upper portion of the tumor, I tie it *en masse* and cut it off. I never met with a growth exactly like this before. The whole broad ligament is the seat of disease, and the bleeding is very free. The diseased mass is probably malignant, for it extends down deep into Douglas's *cul-de-sac*, and has attacked the pelvic walls so that it is impossible to remove it wholly. All that I can do is to check the alarming bleeding and remove as much of the growth as possible. It will be necessary to insert cobbler's stitches across the whole extent of the broad ligament. This I do, tying the stitches at short intervals. The womb also is implicated and it will have to be removed. This is done by transfixing the cervix, tying it on either side by a double ligature, cutting off the uterine body, and then sewing the edges of the stump to one another by gut sutures.

Considering the nature of this disease and its extensive ravages, it is surprising how little this girl has suffered.

As you see, her condition is a very serious one, for the shock has been great. Her pulse is extremely weak and there is great danger of her dying on the table. We have been giving her hypodermic injections of strychnia and digitalis. Had I known beforehand what would have to be encountered I should not have operated; but having begun, I was forced to continue. I irrigate the abdominal cavity thoroughly and insert a drainage-tube and close the abdomen. I have been fortunate in controlling the bleeding so easily. These are the cases in which it is sometimes necessary to pack the abdominal cavity with gauze and to leave it there for several days.

The whole back portion of the uterus has been eaten away by the disease. It looks as if gnawed by rats. The omentum, broad ligament and pelvic tissues are also involved. This is the first time that I have ever removed a womb by abdominal section for cancer of its body. I have extirpated the whole organ per vaginam, but that is altogether a different operation. The disease in this case probably began in the ovaries, for I came across a cyst which had the mother-of-pearl appearance found only in ovarian tumors. I performed the operation with all the ordinary care and precaution; but I do not see how it is possible for this girl to get well, although she may possibly recover from the operation. This, however, is even doubtful, for she has lost much blood and is fearfully collapsed, and may die in a few minutes.

You may ask me, Did I ever lose a patient on the table? Yes; I once had that misfortune. Some years ago I was called to a distant town to see a woman with cancer. While there, the physicians present told me that there was in the town a poor school teacher who had been bed-ridden for months, with obstinate constipation and vomiting, caused by the presence of an abdominal tumor. She was frightfully weak, and emaciated and bed-ridden. I found that she had two ovarian tumors, and also a bad stricture of the rectum. I promised that if the physicians would dilate the stricture and thereby get her into better shape, I would come and remove the tumors, although it was a very hazardous case, and that, in her weak condition, if the cysts were adherent she would most likely not recover from the operation. Well, after the

lapse of six or more weeks the physicians wrote to me that the vomiting had been checked to some extent, and that her general condition was better. I therefore went up and performed the operation, although she was still dreadfully weak. Only one of the gentlemen had ever seen an abdominal section before, and they all watched the operation with a great deal of interest, and I, not having a skilled assistant, was equally intent. The tumors were removed after a somewhat serious operation, and I was congratulating myself that everything had gone along so well, and had indeed begun to sew up the wound, when the physician who was giving ether said that the patient had stopped breathing. We tried in vain to resuscitate her. She was dead, and we were all greatly shocked. Then came up the question who should inform the family, and the two attending physicians begged me to do it. I broke the bad news as gently as I could, but it was a hard task, the hardest I ever undertook. In a small country town bad news travels fast, and when we left the house we were buttonholed at every corner and had to repeat the sad story over and over again. Naturally, I did not feel like remaining in the town any longer than was possible, but there was no train until evening; so I telegraphed to the main office of the railroad company and asked the head official to let an express train stop for me, early in the afternoon, which he was kind enough to do. But while waiting for it at the station, I had to go over the story again to some bystanders. One of the attending physicians was a man weighing some two hundred and fifty pounds. A few weeks after the operation his wife wrote to me, stating that her husband's health was failing, and she described his symptoms, which were those of diabetes. I told her to get some of his urine without his knowledge, and send it to me. This was examined and found to contain sugar. I therefore wrote to him, explaining what we had done, and advising him to consult a specialist. He did so, but got no better. Finally he went to a warmer part of the country and stayed there, struggling desperately to live, but he finally died. I believe that he had had a latent tendency to diabetes at the time of the operation, and that the shock of our patient's death developed it at once.

Some years ago a well-known English surgeon came to this country, apparently well. While in this country he received a terrible mental shock, and at once his health went down. Albumin, I think, was found in his case; but I am not sure whether it was albumin or sugar. He continued to fail, and that so rapidly that he died at sea while on his way home.

I do not recollect having had any other patient die on the table, but we have had some very close calls. The woman on whom I operated last Friday in the ward class came very near dying on the table. We had to stop twice during the operation, which was undertaken for the removal of a pus sac. The patient was greatly reduced and had a high temperature with a pulse of 130. After the operation the temperature came down, and since the operation it has not been over 99°.

I do not think that this girl will live over forty-eight hours, for in her condition, reduced as it is by a malignant tumor, she probably has not a sufficient amount of vitality to react. I shall at once begin to give her nourishment by the bowel, with small doses of whiskey by the mouth. I order whiskey, because we cannot nowadays get decent brandy. All the brandy in this country is a manufactured article. You can, however, get pure whiskey, if you pay enough for it. I shall give teaspoonful doses every fifteen minutes until reaction sets in. I put in at the lower angle of the wound a glass drainage-tube, and it will be examined every half hour. If there is bleeding, I shall inject a little diluted Monsel's solution. I have never had to resort to this styptic in this way, but it is a proper thing under certain circumstances. I have stitched the stump of the uterus to the lower angle of the wound. I use the drainage-tube, because with this malignant tissue in the pelvis we are almost certain to have septic trouble if the patient lives forty-eight hours. Whatever the result may be I shall inform you.

Two weeks later the patient was again brought before the class, and Dr. Goodell made the following remarks.

This is our patient of two weeks ago. She has gained in flesh and in color since the operation, and is, in fact, a great deal better than before it. The glass drainage-tube has been removed and has been replaced by a rubber one. To-day I wish to see if we can remove this. There has been considerable discharge. I shall also remove the stitches that secure the uterus to the lower angle of the wound. The reason that the drainage-tube has been kept in so long, is

the fear that the discharge from the diseased tissues left behind would set up septic trouble. I may be mistaken in regard to this being malignant disease, for she has improved far more than I should have expected. I have, however, repeatedly seen in cases of cancer of the breast, where the disease has been removed and a clean wound substituted for the large sloughing wound, great improvement follow. I have seen the same thing in cancer of the womb where, by removing the neck, or the womb itself, or by curetting, the patient will greatly improve, because the hemorrhage has been stopped and there has been removed temporarily, at least, the source of the chronic blood poisoning. After such an operation the appetite often improves wonderfully, the color comes to the cheeks and the patient and her friends may think that she is cured; but after a time the disease returns anew in the old locality or in adjacent organs. It will, therefore, not do to trust too much to the appearances of the patient. We shall now have her removed.

A gentleman has just handed me a note, in which he said that he and Dr. Formad examined portions of this growth and found it to be a round- and spindle-celled sarcoma. That leaves no doubt about it, and acting on this information I shall take out the drainage-tube and allow the wound to heal. For, if it heals up, the development of the growth will be inside and therefore unseen, instead of outside, through the opening.

I once learned a lesson in regard to this point. I removed a malignant growth and left the drainage-tube in a long time. The result was that at the reproduction of the disease it burst through the opening, making a horrible mess and stench. I do not think that it hastened the death of the patient, but it made everything unpleasant around her. Her friends, of course, attributed the bursting forth of the carcinoma to the operation, and, as they were ignorant people, it was almost impossible to make them understand the cause of the trouble.

Pills of Iron Protochloride.—In a paper read before the Edinburg Chemists' Assistants Association, Mr. John Finlay stated that the following combination yields satisfactory results, barring the size of the pills: Ferrous chloride, anhydrous, grs. 3; glycyrrhiza, gr. 1; extract of glycyrrhiza, gr. 1. To make one pill.

Communications.

Membranous Croup.[1]

By C. L. Dodge, M. D.,
Kingston, N. Y.

"The term pseudo-membranous laryngitis, laryngo-tracheitis, or true croup, is applied to a common and fatal disease, the essential anatomical character of which is inflammation of the larynx, or of the larynx and trachea, with the formation of a pseudo-membrane upon its surface."[2] A generation ago this was a common disease. It is occasionally met with at the present time, but most of the cases that we now see are, strictly speaking, laryngeal diphtheria.

Etiology.—It is now held by some of our highest authorities that membranous croup and laryngeal diphtheria are identical. Thus Northrup[3] tells us that "He believes it is not possible in the present state of our knowledge to separate purely local croupous laryngitis from laryngeal diphtheria of mild type," and that "it seems advisable, therefore, to consider all cases of pseudo-membranous laryngitis not of traumatic origin, as local manifestations of diphtheria, and base the treatment on that diagnosis." From this opinion I feel obliged to express my dissent. Jacobi also says:[4] "In former times which are unknown to the younger generation of physicians, when no such epidemics [of diphtheria] existed, the only form of diphtheria occurring now and then, was the local laryngeal diphtheria called pseudo-membranous croup. It was then a rare disease, while at the present time it is of but too frequent occurrence." This statement I regard as misleading. Membranous croup was *not* in former years so very rare. In 1858,[5] the year assigned by Jacobi as the time when diphtheria first made its appearance here—and I may add that but five cases of death from this disease were reported that year in New York—there were 478 deaths reported from membranous croup. In 1859 there were reported 622 deaths from membranous

[1] Read before the Ulster County Medical Society, December 9, 1890.

[2] J. Lewis Smith.

[3] *Keating's Cyclopædia of the Diseases of Children*, vol. ii, p. 521.

[4] Pepper's *System of Medicine*, vol. iii, p. 101.

[5] *Vide* article Membranous Croup, by J. Lewis Smith, *Transactions New York State Medical Association*, vol. i, p. 432.

croup, which exceeds by 127 the average number of deaths per year reported from diphtheria, from 1860 to 1873. If the membranous croup of those days was, as Jacobi asserts, nothing more or less than local laryngeal diphtheria, why was it not contagious? Why did the diphtheritic process invariably begin in the larynx and remain there? Why did the constitutional symptoms of diphtheria, the septic poisoning, the enlarged glands, etc., never appear? Why were none of the sequelæ of diphtheria ever observed? In short, if it was the poison of diphtheria that gave rise to the membranous croup of that time, how shall we explain the fact that it never gave rise to general diphtheria, but invariably manifested itself as a localized disease of the larynx? Northrup states that of the autopsy records of one hundred and fifty-one cases of laryngeal diphtheria, in only one case was the membrane found in the larynx *only*, and he further remarks[1] that "The melancholy fact that but one case had diphtheria of the larynx *only*, stands out as a grim reminder of the tendency of the lesion to invade the regions adjoining it above and below." In former years this "tendency of the lesion to invade the regions adjoining it above and below" was not observed. How shall we explain this if the disease was the same as we now see it?

If there was once a disease called pseudo-membranous laryngitis that was produced by other causes than the diphtheritic virus—which I think few will be disposed to deny—then there is now a pseudo-membranous laryngitis distinct from diphtheria. "It is well, therefore," as J. Lewis Smith forcibly remarks, "to briefly recall the evidences that croup in a certain proportion of cases results from causes other than diphtheria. The occurrence of croup in localities where diphtheria is unknown of course indicates the operation of some other agency than the dipththeritic poison." Therefore I maintain that, before diphtheria became epidemic or endemic in this country, there must have been some other cause for the membranous croup which prevailed at that time.

In this, as in most other diseases, there exists a predisposing and an exciting cause. The chief predisposing cause is heredity: the truth of this is beyond cavil. Croup, as the phrase goes, runs in certain families from generation to generation. This is as well known among the laity as the profession. The common exciting cause (exclusive of the diphtheritic form) is exposure to cold. Standing by an open window with insufficient clothing on a windy day, seems frequently to be the starting point of an attack of croup. This is the history in so many cases that the relation of cause and effect seems almost equivalent to a demonstration. It occurs most often between the ages of two and seven years. The anatomical conformation of the larynx in childhood, together with a peculiar susceptibility at this age, seem plausible reasons for its greater frequency in the young. One attack seems to predispose to others.

Symptoms.—In diphtheritic croup we usually find the symptoms characteristic of general diphtheria. In the majority of cases the membrane appears first in the throat, and from there descends into the larynx. It is held by some that in the so-called uncomplicated cases the membrane is confined to the larynx—starts there and stays there. This is possible but it must be exceedingly rare, for Northrup, who avows himself a unicist in this matter, is able to show but one case of this kind in his statistics. He gives the autopsy records of one hundred and fifty-one cases of laryngeal diphtheria, and states[1] that "in fifty-eight cases diphtheria of the pharynx antedated the laryngeal symptoms, and in nearly all other cases, the number not being determined, membrane appeared sooner or later in the pharynx. In eighty-eight cases there was evidence that the membrane made its appearance first in the larynx, or at the same time as in the pharynx. *In only one case was it in the larynx only.*" The admission, "or at the same time as in the pharynx," robs this statement of much of its value as evidence that the laryngeal affection was the primary one. When true diphtheritic membrane appears in the throat the question of diagnosis is settled once and for all.

I wish to remark here that the classical description of croup, as well as of some other diseases, notably typhoid fever, is no longer to be trusted as absolutely correct. The truth of this statement will be made apparent as we proceed with the symptomatology.

Case 1. This occurred in my own family. Boy, two years and three months old, was taken suddenly about 12 o'clock Monday night, December 20, 1886, with a harsh,

[1] *Loc. cit.*, p. 528.

[1] *Loc. cit.*, p. 525.

croupy cough, slight fever and dyspnœa. I gave him small doses of syrup of ipecac and paregoric, and in less than an hour the attack passed over and he fell asleep and slept till morning. I considered the case one of spasmodic croup, and felt no uneasiness regarding it. It is proper to state also, in this connection, that the child had suffered the previous week from a cold and a slight sore throat—with no symptoms of diphtheria, however,—and had so far recovered that no treatment was required for a day or two before the attack of croup. The next day, December 21, he seemed better, but not entirely well. The pulse was slightly accelerated, but the temperature was normal. Towards night slight hoarseness appeared, but the child was up and dressed, playing around the room. On the 22d, the patient grew worse: he could no longer speak clearly and distinctly, and the peculiar nervous symptoms began to manifest themselves, still no fever appeared, the temperature was taken regularly and it remained normal throughout; the pulse was somewhat increased in frequency; the dyspnœa gradually increased, cough became hoarse, not harsh as in the beginning; voice steadily grew weaker. The throat was normal, frequent and thorough examinations showed no membrane or patches *at any time*. On Friday morning, the 23d, dyspnœa became the prominent symptom, attacks of suffocation came on, cyanosis increased till the lips became blue, and the fingers and face dusky. About six P. M. tracheotomy was performed, without an anæsthetic, as the child was semi-unconscious. The operation was rapidly and skilfully done, the child began to breathe naturally as soon as the tube was inserted, and in a few minutes took a drink of water. He slept well all that night, the tube required cleaning but few times till morning, when it began to clog badly. The false membrane descended into the bronchi, and the child died from suffocation at 1 o'clock Sunday. I deceived myself in this case by supposing—as I had been taught to do—that because there was no fever there was no inflammation, and, logically, if there was no inflammation there could be no exudation with false membrane. I now know what I did not know then, that the formation of false membrane in the larynx in some cases at least takes place without fever.

There were no cases of diphtheria in the neighborhood, the child had not been exposed to that disease, and no case occurred afterwards among any of those who were with him. On two occasions, when the tube became stopped up and the little fellow seemed on the point of suffocation I applied my lips to the tube and cleared it by suction. If the case had been one of diphtheria I certainly would have contracted the disease.

Furthermore, three other physicians of large experience saw the case and there never was any question as to the diagnosis. The medical treatment was the routine one of calomel, potassium chloride, emetics, alkalies, fumigations, etc.

Croup commonly begins gradually and insidiously, but there are many exceptions to this rule. The so-called prodromic symptoms are by no means invariably present. These symptoms, upon which great stress has been laid by some writers, consist of slight cough, with the other evidences of nasal, pharyngeal and laryngeal catarrh, with perhaps slight fever, although this is often so slight as not to be detected unless special attention be directed to this symptom. This condition may last two or three days or a week in some cases before the attack of croup is ushered in. This usually takes place in the night somewhere between nine and twelve o'clock, when the child is suddenly roused from his sleep with a loud ringing cough. At first it is short and sharp, but it soon becomes hoarse, and gradually grows weaker and less barking. The voice is also changed; it is hoarse and whispering, and gradually grows weaker and fainter as the disease advances, until it becomes wholly suppressed. The characteristic croupy respiration is present from the onset. Gradually inspiration becomes stridulous. At first expiration is short and harsh, later on it becomes stridulous also. The breathing now becomes somewhat quickened and symptoms of nervousness and extreme restlessness appear. The dyspnœa steadily increases, with occasional attacks of suffocation, from which the little patient emerges to struggle on a little longer. Inspiratory recessions now take place at the supra-sternal notch and the supra-clavicular regions. The soft parts also yield at the epigastrium. Cyanosis now comes on, the blood is no longer fully aerated and the lips become blue, the fingers and face dusky. Death takes place from strangulation, sometimes ending in convulsions and stupor.

Diagnosis.—The diagnosis of membranous croup from laryngeal diphtheria presents no difficulties when the latter occurs as a

complication of general diphtheria; it is only in those cases where the diphtheritic inflammation manifests itself exclusively in the larynx that we feel doubtful as to its true nature. Is it possible, then, to distinguish pseudo-membranous croup from laryngeal diphtheria? I believe that it is in some cases, but not always. If a child have croup after exposure to diphtheria, but with no symptoms of that disease, further than the laryngeal disorder, we are warranted in calling it diphtheritic: further, if a child die with croup without *known* exposure, and with no other symptoms of diphtheria, and shortly after other members of the family are attacked with unequivocal symptoms of diphtheria, we are also warranted in believing the first to be diphtheritic; but, *per contra*, if a child have a similar attack of croup and no other member of the family suffer, there being no history of exposure, and no epidemic prevailing in the immediate locality, I believe we are warranted in excluding the diphtheritic virus as the cause of the croup. The case cited above illustrates this point.

The points, then, in favor of diphtheria, are known exposure to this disease, or prevalence of an epidemic; albumin in the urine; prodromic symptoms adynamic. If favor of croup: lack of exposure, no epidemic prevailing; no albumin in the urine; prodromic symptoms not adynamic.

The ablest practitioners, however, admit the impossibility of making a positive diagnosis in all cases.

It is sometimes quite difficult to distinguish between membranous and catarrhal croup. Membranous croup usually begins gradually, although there are exceptions to this rule as illustrated in the case reported above. Spasmodic croup, that is, the attack proper, invariably comes on suddenly and unexpectedly, and in the great majority of cases in the night.

The severe symptoms of membranous laryngitis may first appear in the daytime. The pulse is of no value in the diagnosis; the excitement occasioned by an attack renders it absolutely worthless as an indication of fever *per se*. The temperature, on the contrary, is of the utmost importance, and should always be taken. The fever, in my opinion, is the most important symptom in the diagnosis. The older writers all tell us that membranous croup is attended with fever, and that in spasmodic croup it is mostly absent. This is one of the points in the differential diagnosis. In support of this statement I quote from Niemeyer who is usually very accurate in his descriptions. He says,[1] of the diagnosis, that "dyspnœa is rare in laryngeal catarrh, and is never persistent, nor is there much fever, while in croup, fever never fails." Now, as a matter of fact, this statement is almost exactly the reverse of the truth. To Dr. Jacobi belongs the credit of setting the profession right in this matter. He tells us, in positive terms, that catarrhal laryngitis in the child is a febrile disease. He also says[2] that uncomplicated sporadic croup has no increase of temperature or very little; catarrhal laryngitis is mostly attended with high fever. In very many cases this symptom has guided him safely, in spite of the statements of the books. "There is no fever or very little except in the cases of generalized diphtheria." My experience confirms this view. A case of croup developing suddenly at night, with high fever and flushed face, is almost surely catarrhal. Furthermore, in catarrhal laryngitis, the hoarseness (aphonia) and harsh croupy cough come on abruptly, and often subside in an hour or less, although in some cases the attack may last much longer—but sooner or later comes a decided remission. The child is pretty certain, however, to have a fresh attack the following night, just as sudden as the first. Neither the frequency of relapses nor the history of previous attacks of catarrhal laryngitis warrant us in assuming the catarrhal nature of an individual case, for quite frequently we meet with cases of true membranous croup in children who have experienced many attacks of catarrhal laryngitis.

Age also has some bearing on the diagnosis. Membranous croup is rare under one year, while, according to Jacobi,[3] twenty per cent. of all the cases of spasmodic croup met with are under one year.

When laryngitis is the principal element in the attack, hoarseness may remain for several days, but this of itself does not signify much. The totality of the symptoms, as the homœopaths say, is of great importance in discriminating between catarrhal and membranous croup. "In the latter," as Jacobi[4] ably maintains, "the main symptoms—viz., stenosis, hoarseness (or aphonia)

[1] *Text-Book of Practical Medicine*, vol. i, p. 25.
[2] Pepper's *System of Medicine*, vol. iii, p. 95.
[3] *Loc. cit.*, p. 93.
[4] *Loc. cit.*, p. 95.

and cough—will mostly develop simultaneously and in equal proportion; the unproportionality of the symptoms—for instance, much stenosis and cough, but little hoarseness, or barking cough and hoarseness with little stenosis—would speak for catarrh." Laryngismus stridulus is made synonymous with spasmodic croup by some writers. This is much to be regretted, as it tends to needless confusion. Membranous croup is easily distinguished from this affection. Laryngismus stridulus is not inflammatory, but purely spasmodic. It is attended with great dyspnœa or momentary suspension of respiration, without fever or cough. Furthermore, laryngismus stridulus is a rare disease in this country as compared with either catarrhal or membranous croup.

Prognosis.—The prognosis is unfavorable in the mildest cases. Diphtheritic croup has been said to be the most fatal disease to which childhood is exposed, and true membranous croup in infants and young children is equally fatal. The rate of mortality is very high. Authorities differ widely as to percentage: some, as Jacobi[1] and Mackenzie,[2] set the death-rate, without operation, at ninety per cent. On the other hand, J. Lewis Smith,[3] Meigs and Pepper[4] and Agnew,[5] believe that recovery without operation is more frequent than has commonly been supposed. According to Lovett and Munro,[6] the experience at the City Hospital (Boston) has been as follows: forty cases of diphtheritic croup have been treated medically and every one died. Dr. G. W. Gay, visiting surgeon, wrote, in 1885:[7] "Not a single case of pseudo-membranous laryngitis ever recovered in this hospital without operation." And he quoted Dr. D. W. Cheever, senior visiting surgeon, as writing to him in 1884:[8] "After reflection, I cannot recall a case of membranous laryngitis that I have known to recover without tracheotomy." Since Dr. Gay's article was written there have been two recoveries from moderate dyspnœa without operation. I have seen one case of diphtheria with croup as a complication—where the voice was faint and husky, with decided dyspnœa, in a girl five years of age—recover with medicinal treatment alone. I have also met with one case of membranous croup—judging from the almost complete extinction of voice, which at first was hoarse and feeble, together with the dyspnœa—in a girl six years old, which recovered without tracheotomy.

In diphtheritic croup much depends on the type of the epidemic. When laryngeal symptoms appear early, the attack is apt to be more severe than when they occur in the declining stages. The younger the age the higher the mortality; for the younger the child the smaller the windpipe and larynx, and the sooner stenosis results. Unfavorable symptoms are increasing debility and cyanosis, feeble and irregular pulse; also the development of bronchitis or bronchopneumonia. When emetics fail to act, or spontaneous emesis takes place, the case is generally hopeless. Among the favorable indications may be mentioned loosening of the cough, increase of expectoration and freer respiration.

Treatment.—The medical treatment of the present day is practically the treatment for diphtheria, since that disease is responsible for a large proportion of the cases of croup. The use of mercurials is advocated in all forms of membranous laryngitis. The bichloride of mercury is the preparation advised by most writers in as large doses as are warranted in each particular case. From one-sixth to one grain, in divided doses well diluted, is given during the twenty-four hours. Calomel is preferred by some as being just as efficacious and safer. The tincture of the chloride of iron is still a favorite with many practitioners. Potassium chlorate is condemned by most modern authors as being injurious to the kidneys. Formerly alkalies were much employed in the treatment of croup, for their supposed solvent action on fibrin (antiplastics of the older writers). Now, however, except in the form of inhalations with the atomizer, they are rarely prescribed. In diphtheritic croup I have obtained the best results from sulphur applied topically by insufflation and administered internally in small doses frequently repeated.

Unfortunately but few cases yield to medicinal treatment. Nothing then remains but resort to surgical measures.

We now have the choice of tracheotomy or intubation. The proportion of recoveries

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[1] *Loc. cit.*, p. 103.
[2] *Diseases of the Throat and Nose.*
[3] *Diseases of Children*, Philadelphia, 1881; also *Am. Jour. of Med. Sci.*, April, 1885, p. 319.
[4] *Diseases of Children.*
[5] *System of Surgery*, vol. iii.
[6] *Amer. Jour. of Med. Sci.*, July, 1887, p. 166.
[7] Gay, quoted by Lovett and Munro. *Ibid.*
[8] Quoted by Gay: *Med. News*, July 12, 1884.

after tracheotomy, according to Wharton,[1] is about one in every four cases. Intubation gives about the same, Waxham[2] placing it at 26.77 per cent.

MEDICAL JURISPRUDENCE OF RAILWAY SURGERY.

BY HAROLD N. MOYER, M. D.,

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PROFESSOR OF PHYSIOLOGY IN RUSH MEDICAL COLLEGE.

When a suit is brought, the railway surgeon, according to my observation, is placed at a disadvantage in two ways; first, his testimony as an expert is always lessened in its effect by the question, "Are you an employee of the road?" Then again his loyalty to his principals, and his not infrequent detection of malingerers, place him in an attitude of "expectant-attention," and he sees in every claimant not presenting palpable deformities a fraud and cheat. That this picture is not overdrawn will be apparent to most physicians who have devoted special attention to the practice of medical jurisprudence, and that it is one frequently accompanied by a large verdict for the plaintiff is a common experience. The railway surgeon should, I think, assume in all these cases that the person is injured and by demonstration and reasoning convince himself to the contrary if the facts warrant it. It has always been my custom when acting for the plaintiff in such cases to assume that the person was not injured and then by a chain of reasoning or direct observation to convince myself if possible of the contrary. I have so far always been able to make such conclusions effective on the witness stand. The human mind is so constituted that we cannot be too careful in eliminating unconscious bias, which at times may be apparent to every individual in a croweded court room, excepting its unfortunate but honest possessor.

The qualifications that a railway surgeon should possess have enormously augmented within a few years. It is but a short time since anatomy, operative surgery, and a modicum of pathology was about all that was needed. In too many instances the older railway surgeons have not advanced beyond this, and appointments are still made upon these lines. There never was a time in which extensive knowledge of pathology and internal medicine was more needed by the railway surgeon. It is precisely upon these lines that I have seen the most unfortunate results, in that the decision of the railway surgeon enforced a long litigation upon the plaintiff and usually resulted in the railway company paying a sum vastly in excess of what the case could have been settled for originally. In the majority of cases a meritorious case can be settled for much less than will be awarded by the average jury and the plaintiff will be saved vexatious litigation.

It is apparent that injuries which cause gross visible defects will never form any considerable part of this kind of litigation. The loss of a hand, leg or eye will and must always be measured in damages by the jury. The cases in which the judgment will turn on expert opinion will be those in which the injuries are obscure, to internal organs or deep-seated joints, in which the conditions must be inferred from objective and subjective symptoms; those in which the clinical picture will be the guide in reaching a diagnosis. Injuries to the nervous system will far outnumber those of other tissues and organs, and in the difficulty of their medico-legal diagnosis (to coin a phrase). It is in this class of cases that the railway surgeon seems to be most deficient. So-called spinal concussion has furnished a fruitful field of contention in railway medical circles and the deliverances upon this subject has not been altogether what could have been hoped for scientifically. It is not surprising when a railway surgeon is invited to meet a colleague in an examination to have the former request the patient to bend the body, stand upon one leg, balance his body with the eyes closed; then to percuss the spine, tap the patellar-tendon and announce that the examination is closed. When a surgeon who is accustomed to this kind of work has a deliverance upon spinal concussion, is it matter for wonder that the medical world is not impressed? So far as my own experience extends I have never met a railway surgeon at one of these examinations who was provided with an ophthalmoscope or an electric battery, nor have I seen a complete examination of the sensibility or of the reflexes made by a railway surgeon even when every opportunity was given.

The necessity of the railway surgeon being an "all round" man in the best sense

[1] *Keating's Cyclopædia*, vol. ii, p. 544.
[2] Quoted by Northrup. *Ibid.*

of the word is now more than ever apparent. Within a few years the testimony of experts consisted in stating his experience, qualifications, knowledge and opinion of the particular case. Now he is called upon to defend this opinion in the face of a cross-examiner, who may be equally or even better posted on the exact points at issue than he is himself.

It is a matter of experience that suits against corporations for personal injuries have increased greatly in the last few years and the amounts recovered have been much greater. This I think is due to two principal causes: the rulings of courts on the law of negligence, and the fact that corporations have too frequently fought cases in which both law and facts were against them, relying largely upon brilliant and well-paid counsel to tire litigants and defeat a meritorious claim. This condition of affairs has produced lawyers who practice this branch of the law almost exclusively, and it is now possible for litigants to secure the best of legal and medical talent by assigning a certain portion of the prospective judgment. It has been my experience that these cases are usually much better prepared, so far as the medical questions are concerned, for the prosecution than for the defense. Part of this preparation consists in posting the counsel on the direct points at issue and thoroughly indoctrinating him with the theory of the case adopted by the medical witnesses.

Cases are frequently injured—and this occurs about as often for the plaintiff as for the defendant—by calling a witness who writes M. D. after his name and whose opinion is adverse to the other side, while in fact he cannot sustain the opinion or himself on cross-examination. A recent case occurring in the city of Chicago in which a verdict of $30,000 was returned against a railway company well illustrates this point and shows the injury that may be done to a case by a poor expert witness. The plaintiffs put three physicians on the stand and the defendant company five. One of the latter, after airing his erudition on the joints, ligaments and muscles of the spine (the injury was to the spine), failed to remember what muscles were attached to the styloid process of the temporal bone. Another said that the spinal cord terminated opposite the last dorsal vertebra in the "caudal appendix." A third, when asked to give the normal order of the polar muscle reactions, said that he had never heard of such a thing and that the question was absurd and unanswerable. It must be apparent that such witnesses materially lessened the effect of the two remaining good witnesses and far outweighed the mere *ex cathedra* opinion of a larger number. Such witnesses are only an embarrassment and not a help.

Proficiency in clinical and operative surgery will for obvious reasons furnish the chief recommendation of the railway surgeon of the future, yet in my judgment they do not furnish the best training for the medical jurist. That is almost a separate branch of study, and requires a thorough knowledge of physicial diagnosis, not only surgical but medical and also pathology. The medical jurist should perfect himself in all the most improved methods of diagnosis, in all branches of medicine, more especially those methods which furnish us with the objective signs of disease, for after all it is the objective signs that determine the status of a case in court. To these should be added a careful study of the art of medical jurisprudence—that is, the orderly presentation of facts and theories, so as to lead up to a logical conclusion and all that in plain, non-technical language and in such fashion as to convince the average juryman that his position and judgment are unassailable.

TRAUMATIC NEUROSIS.—TEMPORARY INSANITY FOLLOWING OPERATION FOR ABSCESS.

BY WILLIAM H. SHIPPS, M. D.,

BORDENTOWN, N. J.

On April 2, 1890, I was requested by a fellow-practitioner, to operate upon a patient suffering with a large abscess, situated in the upper portion of the right breast and extending to the axilla of the same side. The patient, a man 40 years of age, stated that the abscess was the result of an injury sustained a month before, and had been gradually developing ever since, causing him intense suffering. He had been under the care of two physicians, who had used both local and internal treatment with the hope of aborting the abscess. There was nothing about the general appearance of the man to attract notice, except, perhaps, a certain dulness of expression, and a quick, nervous manner of speech, which at the time I attributed to individual peculiarity. He

gave me a brief account of the injury and the treatment employed, and denied ever having been the subject of specific disease. Without further ceremony I freely opened the swelling, evacuating about eight ounces of pus and blood, after which an antiseptic dressing was applied. Immediately the patient expressed himself as much relieved, and stated his intention of at once returning home by rail, a distance of ten miles. From this, however, he was dissuaded, and urged to pass the night at a friend's house in this city, in order that opportunity might be given me to re-dress the parts in the morning.

The morning following, I called upon the patient, and was surprised to learn that, shortly after entering his friend's house, he had begun to talk and act strangely, altogether unlike anything which had been known of him before. During the night he became at times unmanageable, refusing to go to bed or take either medicine or nourishment. On entering his room I found him before the mirror, gazing vacantly at his image in the glass. He was almost naked, and had torn every vestige of the dressing from his body. He seemed entirely indifferent to the presence of others about him, save that our entrance caused him more or less uneasiness, which was evidenced by his continually pacing the room and peering out of door and window, as if in search of some avenue of escape. On motioning him to a chair, he would insist upon getting on it with his feet, repeating the operation as often as I attempted to make him occupy it in the natural position. At times he would insist upon getting out of the windows, and was only prevented from so doing by the determined resistance of his attendants. For two days he absolutely refused all food, and during that period had not slept an hour. His pulse and temperature being normal throughout, and careful inquiry of friends and relatives as to his family history throwing no light upon his present condition, I felt no hesitancy in pronouncing the case one of temporary insanity. I therefore advised that he be removed as speedily as possible to the State asylum for the insane. In this I was seconded by Dr. I. D. Young, of Bordentown, who very kindly saw the patient with me. Accordingly arrangements were made for the patient's removal the day following, or the third day after the case came under my observation. Early in the morning of the day fixed for his departure, I called at the house for the purpose of facilitating his removal. On entering the dwelling, I was met at the door by his host, who with smiling countenance informed me that "John was all right now." On inquiry I ascertained that shortly after midnight he had fallen asleep for the first time in three days, sleeping soundly until daybreak, when he awoke perfectly calm and rational. On meeting the patient I was happy in being able to confirm all that had been told me, and found him sitting up apparently clothed in his right mind, sensible that something was amiss, but totally ignorant of the nature of his attack. In a day or two he returned home, unaccompanied, and since then has been in the enjoyment of good health.

The case was doubly interesting to me, because of the unexpected sequela of the operation, and secondly because his friends attributed his insanity solely to the operation, arguing that as the man was sane prior to the use of the knife, and insane almost immediately afterwards, but one conclusion could be drawn. The satisfactory termination of the case, however, quickly put to flight all such nonsensical reasoning as this.[1]

Foreign Correspondence.

BERLIN LETTER.

The Latest Developments in the Tuberculine Question—Koch Worried and Intimidated.—The Position of the Government in the Case.—Voices from Hospitals.—Vox Populi.—Professional Feeling in the matter.

BERLIN, February 17, 1891.

The storm of enthusiasm has passed and the low tide of cold inspection and calculation has set in. The miracle is—not what little there is left of the glowing anticipations of the Koch Chauvinists, but that there is anything left at all. It required the stern and pitiless voice of Virchow to restore to the profession the common sense which apparently had been completely lost. It required, moreover, unwarrantable sacrifices of human lives to convince the profession that the millennium of medicine has not yet

[1] [Neuroses following surgical injuries and operations have of late attracted considerable attention, and this report by Dr. Shipps is an interesting contribution to the subject.—ED. REPORTER.]

arrived. Virchow, as I have learnt from a good source, will continue his warfare against the "lymph" without zeal or malice, but with a persistence which will ultimately prove fatal to the young remedy. As to the deaths caused by tuberculine, I regret to state that their number is not a small one. Sudden failure of vital energy caused by the artificial fever, hemoptysis, and miliary tuberculosis are the chief sources of danger from the exhibition of the remedy. Quite recently a young medical man who had contracted a catarrh of the apex was hurried to death by a rapidly developing miliary tuberculosis under the influence of tuberculine.

Koch's path during the last two months was not a rosy one. His private residence in the Thiergarten, formerly an ideal of seclusion and privacy, soon became the centre of attraction. In spite of all possible signs and inscriptions, such as "moved out of town," postmen and telegraph messengers vied with patients and doctors in besieging the house. He actually did move temporarily to a friend's house, but was hunted and found out by two Western practitioners. There was nothing left for Koch but to flee. Those anxious to see him can do so at Luxor or Ghizeh, near the pyramids which are fortunately unable to interview the German doctor. Koch's flight had, besides, another reason, viz., the gradual falling off of his admirers and the steady increase of his opposers. It is rumored that he left worried and full of anxiety.

In a still worse fix, however, than Koch, is the German Government, and especially von Gossler, the Cultus Minister. It is undeniable that von Gossler alone has brought about the present unpleasant state of affairs in the matter. Koch yielded unwillingly to that official's incessant demands to publish a matter as yet unfinished. Von Gossler evidently was led by political and national impulses. The question of emoluments for the Koch cause has of late changed its aspects. It is likely that no financial aid will be extended to Koch personally. As the matter stands at present, it is more than doubtful whether the Reichstag would vote a large money-grant for the purpose. Meanwhile authoritative voices of clinicians continue to take stand against tuberculine. The Berliner Jüdische Krankenhaus has had a sad experience with the new remedy, and Prof. James Israel, its famous Chief, has banished it completely from the wards. I listened last night to what Sanitätsrath Dr. Thorner had to say about tuberculine before the Verein für Innere Medizin. He had used the remedy since November 20, last year. Thorner censured severely the present arrangement in the distribution of the remedy, which secured for some hospitals and a few clinicians an actual monopoly of the remedy. The ordinary practitioner, he said, ought by all means to be able to obtain the remedy, for he can detect the signs of initial consumption before even the patient himself is aware of the affection. Thorner has had quite satisfactory results with tuberculine, though in one instance the remedy killed a patient. In the majority of cases a considerable improvement took place, as evidenced by a decrease of subjective difficulties and increase of bodily weight. In one patient suffering from apical catarrh, the bacilli had left the sputa under the influence of tuberculine. Thorner then communicated some interesting observations he had made in experimenting with the remedy upon animals. Any animal, he said, suffering from miliary tuberculosis can be cured with tuberculine. This statement—being absolutely new—created considerable astonishment. Likewise interesting was Thorner's statement that, as long as an animal was subjected to tuberculine injections it was immune against infection of tubercle bacilli, and that this state of immunity ceased as soon as the tuberculine was withdrawn. Hence it is clear that Koch's remedy can never be utilized as an immunization lymph against tuberculosis.

There are authorities like Prof Schroetter of Vienna—one of the consulting physicians of the late Emperor Frederick, at San Remo—who deny not only the therapeutic but also the diagnostic value of tuberculine. Bardeleben and Bergmann have lowered their enthusiasm to a minimum, while Leyden and Gerhardt still believe in its future. Henoch, the Nestor of pediatrics, has in plain words designated the remedy as useless and dangerous for children.

Possibly it will interest you also to learn what the Berlin populace think at present of the remedy. The common feeling is very much opposed to the Koch cure, and it is not too much to say that today no intelligent Berliner would submit to its exhibition on his own person.

The profession too, on the whole, is antagonistic to the Koch cure. The Berlin Medical Union at Friedrichstadt, has just formulated its disapproval of tuberculine and

is determined to take a firm stand against the remedy and especially against the present mode of its distribution.

PERISCOPE.

Tachycardia Cured with Electricity and Belladonna.

Dr. Thomas Oliver, Physician to the Royal Infirmary, Newcastle-upon-Tyne, says in the *British Medical Journal*, January 31, 1891:

In July, 1890, I was asked by Dr. Farquharson, of Newcastle, to see with him in consultation a young man, aged 28—a nervous, anxious-looking and emaciated man, who was slightly cyanosed. There was no history of rheumatism. Five or six years ago he met with an accident, and again, two years ago, when he fell over a "tipping" with his horse and cart. Though not materially injured at the time, he felt as if he had had a shock. From this date he became extremely nervous, and began to lose all his energy and pluck; he became afraid even of his own horse. He now began to suffer from attacks of violent palpitation, which would last for several days, and within the last three months he has been seldom free from these attacks of palpitation and a sense of cardiac distress for more than a week at a time.

When seen first by Dr. Farquharson in these attacks, the pulse-rate was generally from 190 to 230 in the minute. In his quiet state the pulse seldom exceeded 90, and when this was the case there could be heard a well-marked mitral systolic murmur. There was no albuminuria, no distended jugular veins, and no œdema of feet, but the left pupil was noticed to be smaller than the right—a condition of things which became more pronounced, Dr. Farquharson stated, if the stomach were distended with flatus. He had lately been the subject of dyspepsia and constipation and when these were present his cardiac distress was increased. Beyond a sense of discomfort, of præcordial pain and uneasiness which the excited action of the heart caused, there was no marked dyspnœa. His sleep was broken and fitful. By his illness he had been rendered quite unfit for work.

The slight cyanosis alluded to was noticed in the lips, on the face and in the finger ends. The pulse was small and extremely rapid. I counted up to 240 beats in the minute and then lost it. It was upwards of 250 on Dr. Farquharson's reckoning, but on this point we speak guardedly. Knee-jerks were slightly exaggerated. The lungs were perfectly healthy. Heart: the apex beat, which was very diffused, was felt two inches external to the nipple; there was also marked epigastric pulsation; pulsation, too, was seen and felt to the right of the sternum at the level of the right ventricle. The area of cardiac dulness was increased transversely. The tap of the heart could be seen and heard quite distinctly several inches from the chest—I thought about two feet. Over the aortic area—extending up to the episternal notch and down the sternum to the xiphoid cartilage—was heard a rough grating systolic murmur, followed by a well-marked second sound. It was only by counting the loud second sound of the heart that we were able to estimate the rate of cardiac pulsation. In addition to the grating systolic murmur mentioned above, a soft mitral systolic could be heard, which was carried towards the left axilla, and particularly towards the back at the level of the fifth dorsal spine. Pressure upon the pneumogastric nerve in the neck slowed the action of the heart. The urine was normal; the internal organs of the abdomen appeared to be healthy.

We arranged that he should have 30-minim doses of tinct. belladonnæ, with small doses of Fowler's solution; that for a few days the ether spray should be applied to the back of the neck, and afterwards the interrupted current to the pneumogastric, one pole behind the neck high up, and the other along the course of the nerve in the neck. Within a fortnight he was very much better. His pulse was never higher than 120 a minute, and that only during excitement. A sphygmographic tracing taken at this time showed low arterial tension and well-marked dicrotism. There was still the well-marked pericardial grating and mitral systolic murmur. The area of cardiac dulness remained as before; in its lateral diameter it measured 6½ inches.

It is now seven months since I saw him, and Dr. Farquharson tells me that the patient has made an excellent recovery. Only once since the beginning of July has there been a return of the very rapid action of the heart, and on that occasion it only lasted two or three hours instead of the three or four days as previously. His pulse

at present is never higher than 80 in the minute. For the last few weeks he has been taking arsenic and digitalis.

From being an anxious-looking, irritable and nervous man, unable to follow his employment, he has become calm and more self-possessed, and is now able to carry on his employment, not so much in the out-door department as in looking after the financial concerns of the business. The only unpleasant symptom which has been left is something akin to agoraphobia. In coming into Newcastle by road or rail he has to cross the High Level Bridge which spans the river Tyne, and whether he is in the train or on the roadway he always experiences, when on this bridge, unpleasant sensations originating at "the pit of the stomach as if a void had been suddenly created." This is so apt to be followed by increased rapidity of the heart that knowledge of this fact prevents him from making the journey into Newcastle as frequently as he would.

The subject of tachycardia has attracted considerable attention since Dr. Samuel West and Dr. Sansom have written upon it, and latterly our interest in it has been revived by the remarks made by Sir Dyce Duckworth in the discussion which he opened at the Birmingham meeting of the British Medical Association on Functional Disorders of the Heart. In the absence of a rheumatic history, the origin of the disorder in our patient must be sought for in some condition of the central nervous system induced by the fright and shock, although the pericardial grating, the mitral systolic murmur and enlargement of the heart—in the absence of any pronounced vascular lesion, such as aneurism—must not be lost sight of. The immediate effect noticed when gentle pressure was applied to the pneumogastric nerves in the neck, and the good result which followed electrical stimulation, point in the main to a central cause suspending the inhibitory action of these nerves upon the heart, or to increased activity of the accelerating branches of the sympathetic.

Suppuration of the Antrum of Highmore.

In the *Indiana Medical Journal*, Febuary, 1891, Dr. L. C. Cline, of Indianapolis, has an interesting paper on suppurative disease of the antrum of Highmore, in which he says: The antrum, owing to its size, situation and its relation to the nasal cavities and the teeth, is more frequently involved in the suppurating process than any other of the cavities of the bones of the face and skull which communicate with the nasal passages.

This cavity becomes involved principally from two sources, namely, dental complications and hypertrophic rhinitis. The inflammation does not extend into the antrum by continuity, but probably by the hypertrophy and turgescence of the nasal membrane producing stenosis or complete occlusion of the opening, thus causing hyperemia of the mucous membrane of the antrum, resulting necessarily in an increase of secretion, which accumulates and eventually degenerates and causes a purulent discharge; for it is generally conceded that a catarrhal secretion in a closed cavity will, sooner or later, give rise to a discharge of pus. The symptoms of an acute or recent case are pain and tenderness, with a sense of weight and fulness over the antrum and a pressure up against the eye, with slight hyperemia of the ocular conjunctiva. If due to dental origin, there will be slight pain on pressure of the corresponding teeth. When due to occlusion of the orifice from swelling of the turbinates, there is nearly always severe neuralgic pains, accompanied by more or less swelling and tenderness of the face in the region of the antrum. The pain is usually worse in the morning, and will be increased by stooping or lowering the head. The formation of pus is announced with a chill followed with fever, and if the closing of the opening of the antrum be due to turgescence or swelling of the turbinate bodies from cold, the symptoms may all subside in a few days, and the inflamed membrane will return to its normal condition, or the purulent discharge may continue in a less quantity indefinitely and all the acute and painful symptoms subside.

If the opening of the antrum with the nasal cavity remain free, as in the case of dental origin, the pus finds its way through the opening, and may produce by its constant irritation an obstinate turgescence of the turbinate bodies and occlusion of the nasal passages. The pus is usually discharged at intervals during the day, viz., on rising in the morning and in the afternoon, and when stooping. It is thought by some that when the pus has a dental origin, it is more offensive than when it is due to colds.

The diagnosis is not difficult, as a rule, in the recent or acute cases. The history,

coupled with pain referable to the antrum and side of the face, together with the discharge from one side, will determine the diagnosis. If the case is chronic, a careful inspection of the nose will result in finding pus on the anterior and inferior part of the middle turbinated body; or a drop may be seen protruding between the middle and inferior turbinate bodies posteriorly, which when wiped away, in either position, can be made to reappear by changing the position of the head or pressing on the walls of the antrum. The discharge of a straw-colored pus from one side of the nose is always strong evidence of a diseased antrum.

Dr. Cline says (but we believe it is not so certain) that Voltolin's method, as improved by Heryng, is of great value in these cases. It consists of an incandescent lamp placed in the mouth, over which the lips are closed. The patient being placed in a dark room, the bones of the face become beautifully illuminated. A dark shade will outline the situation of the antrum. If the antrum contains pus it will be outlined by a dark spot and a total absence of any illumination—a marked contrast to the opposite or healthy side.

A very simple and efficient method of diagnosis is to inject a few drops of peroxide of hydrogen with a small syringe, armed with a canula, one-eighth of an inch of the distal end being bent at right angles, so as to enter the opening of the antrum. The nose should be well cocainized to avoid pain. If pus be present, it will boil up and fill the nose with a white foam. By using this method, an exploratory puncture will be unnecessary in the majority of cases.

After we have determined that the antrum contains pus, how shall we get rid of it and cure our patient? There are several methods of treatment, but I will only give what I believe to be the best. In recent cases there may be an effort made to restore the antrum by first relieving the swollen and turgescent condition of the turbinates; then follow with injections of peroxide of hydrogen, as before stated, passing the point of the syringe back about half way between the middle and inferior turbinate bodies. This may be followed by light astringents such as—zinc sulphate, 3 to 5 grains to the ounce; silver nitrate, 3 to 10 grains to the ounce; saturated solution of boric acid, or borax; listerine; or a weak solution of the tincture of iodine.

When the case is chronic, there should be an opening made at the most dependent portion of the sinus. Dr. Cline's practice has been to drill up through the alveolus with a drill run by an electro-motor, and then to insert a silver tube, made from coiled wire. Some prefer entering the antrum in the same way, just below the gingivo-labial fold, between the upper portion of the roots of the second bicuspid and first molar tooth, directing the drill upward and backward at an angle of forty-five degrees. In either case the opening should be of sufficient size to admit of free cleansing and washing out of the antrum. A tube of sufficient length to enter the antrum should be neatly fitted, and guarded from entering the antrum by a shield of rubber or wired to the adjoining tooth.

The after-treatment consists of daily or twice daily, washing out the cavity, first with peroxide of hydrogen (commercial strength), followed with a slightly alkaline or carbolized water in quantity sufficient to thoroughly cleanse the cavity. Then, every second or third day, inject a sufficient amount to thoroughly cover the surface, of one of following solutions, as the case may seem to indicate: saturated solution boric acid, 5 to 20 drops of tincture of iodine to 2 drachms distilled water; sulphite of zinc, 3 to 10 grains to the ounce; nitrate of silver, 10 to 20 grains to the ounce; iodoform, 20 grains to an ounce of the oil of sweet almond.

Of these Dr. Cline likes boric acid the best.

Names of Diseases.

There has, in the course of time, crept into medical nomenclature a number of proper names which have been used in connection with certain morbid conditions. The list has grown so long that a reproduction from *Journal de Mèdecine*, January 11, 1891, of the most common, with their symptoms, may prove interesting and not without utility.

Addison's disease—maladie bronzée—disease of the supra-renal capsules.

Albert's disease—fungoid mycosis.

Aran–Duchenne's disease—progressive muscular atrophy.

Argyll–Robertson pupil—one which changes in accommodation, but does not respond to light.

Astley Cooper's hernia—femoral hernia with a multilocular sac.

Barton's fracture—one of the lower end of the radius involving the joint.

Basedow's disease—exophthalmic goitre.

Baudin's law—antagonism of tuberculosis and malaria.

Bazin's disease—buccal psoriasis.

Beclard's disease—hernia through the saphenous opening.

Bell's palsy—paralysis of the seventh nerve.

Boyer's cyst—sub-hyoid cyst.

Bright's disease—albuminuric nephritis.

Brown-Séquard's combination of symptoms—hemiparaplegia with hemianasthesia of the opposite side.

Cazenave's lupus—lupus erythematodes.

Charcot's disease—amyotrophic lateral sclerosis.

Charcot's joint—the enlarged joint of locomotor ataxia.

Cheyne-Stokes breathing—ascending and descending frequency of respiration.

Cloquet's hernia—perineal hernia.

Colles's fracture—one of the lower third of the radius.

Colles's law—that of non-infection of the mother by her syphilitic infant at the breast.

Corrigan's disease—aortic insufficiency.

Corrigan pulse—water-hammer pulse—the pulse of aortic regurgitation.

Corvisart's facies—asystolic facies.

Cruveilhier's disease—simple ulcer of the stomach.

Cruveilhier's paralysis—progressive muscular atrophy.

Donders's glaucoma—simple atrophic glaucoma.

Dressler's disease—paroxysmal hemoglobinuria.

Dubini's disease—electrical chorea.

Duchenne's disease—locomotor ataxia.

Duchenne's paralysis—pseudo-hypertrophic paralysis.

Duhring's disease—dermatitis hepetiformis.

Dupuytren's disease—retraction of the palmar aponeurosis.

Dupuytren's hydrocele—bi-locular (*en bissac*) hydrocele.

E. Wilson's disease—universal exfoliative dermatitis.

Eichstedt's disease—pityriasis versicolor.

Erb's palsy—paralysis of the brachial plexus.

Erb-Charcot's disease—spasmodic tabes dorsalis.

Fouchard's disease—alveolo-dental periostitis.

Friedreich's disease—hereditary ataxia.

Gerier's disease—paralytic vertigo.

Gibbon's hydrocele—that coincident with hernia.

Gibert's pityriasis—pityriasis rosé.

G. de la Tourette's disease—motor incoordination.

Goyrand's hernia—inguino-interstitial hernia.

Graefe's sign—failure of the upper lids to follow the eyes in descent.

Graves's disease—exophthalmic goitre.

Guyon's sign—renal ballottement.

Harley's disease—paroxysmal hemoglobinuria.

Heberden's rheumatism—that of small articulations with nodosities.

Hebra's disease—polymorphous erythema.

Hebra's pityriasis—pityriasis rubra chronica.

Hebra's prurigo—idiopathic prurigo.

Henoch's purpura—purpura with abdominal symptoms.

Hesselbach's hernia—femoral hernia with a multilocular sac.

Hippocrates's facies—that of agony.

Hodgkin's disease—adenitis; pseudo-leucocythemia.

Hodgson's disease—atheroma of the aorta.

Huguier's disease—fibromyomata of the uterus.

Hutchinson's teeth—notched teeth of hereditary syphilis.

Hutchinson's trio of symptoms—notched teeth, interstitial keratitis and otitis of hereditary syphilis.

Jacksonian epilepsy—focal epilepsy.

Jacob's ulcer—cancroid ulcer.

Kaposi's disease—xerodermia pigmentosa.

Kopp's asthma—thymic asthma—spasm of the glottis.

Krönlein's hernia—inguino-properitoneal hernia.

Laennec's cirrhosis—atrophic cirrhosis.

Landry's disease—acute ascending paralysis.

Laugier's hernia—that across Gimbernat's ligament.

Leber's disease—hereditary optic atrophy.

Levert's law—marginal insertion of the umbilical cord with a small placenta.

Littré's hernia—diverticular hernia.

Ludwig's angina—infectious phlegmon of the subhyoid region.

Malassez's disease—cyst of the testicle.

Ménière's disease—labyrinthine vertigo.

Millar's asthma—laryngismus stridulus-spasm of the glottis.

Morrand's foot—one with eight toes.

Morvan's disease—analgesic paralysis of the extremities.

Paget's disease—pre-cancerous eczema of the breast.

Paget's disease—hypertrophied deforming ostitis.

Parkinson's disease—paralysis agitans.

Parrot's disease—syphilitic pseudo-paralysis.

Parry's disease—exophthalmic goitre.

Pavy's disease—intermittent albuminuria.

Petit's hernia—lumbar hernia.

Pott's aneurism—aneurism by anastomosis.

Pott's disease—ostitis of the vertebra.

Pott's fracture—fracture of the tibia.

Raynaud's disease—symmetrical gangrene of the extremities.

Réclus's disease—cystic disease of the breast.

Richter's hernia—parietal enterocele.

Rivolta's disease—actinomycosis.

Romberg's sign—ataxic swaying in the dark or with closed eyes.

Rosenbach's sign—abolition of the abdominal reflex.

Soesnich's ulcer—infectious ulcer of the cornea.

Stellwag's symptom—retraction of the upper eyelid.

Stokes's law—paralysis of muscles subjacent to inflamed serous and mucous membranes.

Storck's blenorrhea—that of the respiratory passages.

Sydenham's chorea—chorea minor—common chorea.

Thomsen's disease—muscular spasm on voluntary movement.

Tornwald's disease—inflammation of the pharyngeal tonsil.

Velpeau's hernia—femoral hernia in front of the vessels.

Volkmann's deformity—congenital tibio-tarsal luxation.

Wardrop's disease—malignant onychia.

Weil's disease—abortive typhoid fever with jaundice.

Werlhoff's disease—purpura hemorrhagia.

Westphal's sign—abolition of the knee jerk.

Willard's lupus—tuberculous lupus.

Winckel's disease—cyanosis of the newborn.

New Operation for Spasmodic Wry Neck.

Dr. W. W. Keen read a paper on this subject before the Philadelphia Neurological Society, Oct. 27, 1890; it is published in the *Annals of Surgery*, Jan., 1891. The steps of the operation are as follows:

1. The field of operation having been shaved and disinfected, make a transverse incision about half an inch below the level of the lobule of the ear, from the middle line of the neck posteriorly, or even slightly overlapping the middle. This incision should be two and one-half to three inches long.

2. Divide the trapezius transversely.

3. Dissect up to the trapezius and find the occipitalis major nerve as it emerges from the complexus and enters the trapezius. In the complexus is an intra-muscular aponeurosis. The nerve emerges from the complexus at a point between this aponeurosis and the middle line, usually about a half inch below the incision, but sometimes higher up, and then enters the trepezius. It is always a large nerve of the size of a stout piece of catgut, and it is easily found if sought for at the right place.

4. Divide the complexus transversely at the level of the nerve. This division should be made by repeated small cuts, so as not to cut the nerve which is our guide, after which dissect the nerve still further down from the anterior surface of the complexus, where it arises from the posterior division of the second cervical. Cut, or better, exsect a portion of the posterior division before the occipitalis major arises from it, so as to catch the filament to the inferior oblique muscle. This divides the *second cervical.*

5. Recognize the inferior oblique muscle by following the sub-occipital nerve towards the spine. The nerve passes immediately below the border of the muscle.

6. Recognize the sub-occipital triangle formed by the two oblique muscles and the rectus capitis posticus major. In this triangle lies the sub-occipital close to the occiput. It should be traced down to the spine itself, and be divided, or, better, exsected. This divides the *first cervical.*

7. An inch lower down than the occipitalis major, and under the complexus, is the external branch of the posterior division of the third cervical to the splenius. When found, it is to be divided or exsected close to the bifurcation of the main trunk. This divides the *third cervical.*

A drainage-tube and horse hairs are to be inserted, and as the patient lies on the back, although the wound is very deep, the condition is most favorable for good drainage. If desired, the posterior muscles can be united by buried sutures, independently of those in the skin. The after-treatment is the same as for ordinary operations.

Terpene Iodide in Diseases of the Lungs.

In the *New York Medical Journal*, February 14, Dr. William H. Gregg says: For the past two or three years I have carried on a series of therapeutical investigations in search of some antiseptic agent that would act as a specific against the development of acute diseases of the lungs, more particularly acute congestion, pneumonia and those catarrhal and throat affections which are so often the premonitory symptoms of more serious mischief. While I have demonstrated to my own satisfaction that these diseases may be cut short, I am not so sanguine that the remedy will prove curative in all cases where a disease is once fully developed, yet further investigation may prove that it possesses specific properties even in these cases.

It has been my desire only to suggest some drug or combination of drugs which will prevent the ravages of the various cocci that are carried into the lungs through the agency of those septic storms which are so frequent in this climate, before an actual disease of the lungs has been established.

The great disadvantage the physician has to contend against in the administration of medicines is the changes they are liable to undergo when taken into the stomach before they finally enter the circulation. It would therefore appear that we ought to administer all of our remedies hypodermically, and perhaps this is the more rational way of obtaining their full benefit. But this mode has its objections. In the first place, it requires more or less skill; besides, it is painful and at times is followed by unpleasant effects.

I believe that terpene iodide enters into the circulation unchanged, from the fact that it acts as quickly as if it were administered hypodermically. It is my judgment that the remedy offers greater success and produces happier results than any other of this class of remedies. While it is a powerful antiseptic, it is comparatively harmless, for, after prescribing it for several years, I have yet to meet with any unpleasant effect. In acute affections of the throat it may be used in spray, while in other cases it may be given to adults in ten-drop doses, on a teaspoonful of sugar, once or twice a day—in the morning and at bedtime. The morning dose should be followed by a glass of milk or bouillon. Larger or more frequent doses are apt to excite too great a discharge of urine.

I have no doubt that terpene iodide will, should it come into general practice, find a wider range of usefulness than that above indicated. As to its value in phthisis pulmonalis, diphtheria and other zymotic diseases, I am at present unable to speak.

Local Treatment of Tuberculosis of the Larynx.

The *Journal de Médecine de Paris*, January 25, 1891, says that Goris uses various astringent powders for insufflation in the treatment of laryngeal tuberculosis, with the object of coagulating the albumin and forming a more or less protective coating, of keeping aseptic the interior of the larynx, and of relieving pain. He uses the following formula of Schnitzler:

℞ Morphinæ acetatis . . . . . gr. iij
Plumbi acetatis . . . . . ʒss
Sacchari lactis . . . . . ʒv
M. Ft. pulvis.

In addition he prescribes:

℞ Iodoformi (vel iodol) . . . . . gr. xv
Sacchari lactis . . . . . ʒijss
M. Ft. pulvis.

or

℞ Iodoformi (vel iodol) . . . . . gr. xv
Cocainæ hydrochloratis . . . . . gr. iij
Sacchari lactis . . . . . ʒijss
M. Ft. pulvis.

or

℞ Acidi tannici . . . . . gr. vijss
Sacchari lactis . . . . . ʒijss
M. Ft. pulvis.

At the same time, he directs inhalations of the vapor of a three per cent. solution of sodium benzoate, adding at each inhalation a half teaspoonful of the following:

℞ Tincturæ eucalypti . . . . . fʒv
Balsami Peruviani . . . . . ʒj
M.

If the laryngeal secretion is excessive, a drachm of terpinol may be added to the preceding.

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The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

KOCH'S FLUID IN NON-TUBERCULOUS PERSONS.

To determine if injections of the Koch fluid, within the limits prescribed by Koch, produce reaction in healthy individuals, Dr. Erich Peiper (*Allgemeine Medicinische Central Zeitung*, January 31, 1891) injected at the clinic of Mosler, at Greifswald, twenty-two persons in whom evidences of pulmonary tuberculosis were absent. This number included one healthy medical student, one case each, of cystitis that had been relieved, of arthritis, of rheumatic pains at the shoulder, of gastritis already relieved, of sciatica, of gonorrhœa relieved, of a convalescent from typhoid fever, of eczema of the face, of tabes dorsalis, of chlorosis and trigeminal neuralgia, of carcinoma of the stomach, six cases of diffuse bronchitis, one of fetid bronchitis, two of gonorrhœa and one of cystitis. In every instance the fluid was fresh or but a few days old, and was diluted with a five per cent. solution of carbolic acid. The usual precautions were taken. In no case did any complication occur at the site of injection. More than one centigram was only exceptionally used. Four patients failed to react, or showed but slight reaction. Four others had temperatures of 100.7° and a degree of malaise. The remaining fourteen displayed quite decided reactions. Of nineteen who received two milligrams each, four presented a general reaction, with temperatures of from 102° to 104°. Of twenty-one who received five milligrams each, eight displayed evidences of reaction, with temperatures of from 100.5° to 104°. Of sixteen who received one centigram each, twelve reacted, four with temperatures of 100.4°, eight with temperatures of from 101° to 104.5°. The reaction was usually ushered in in from six to ten hours by shivering or a chill. The maximum was soon reached and the temperature slowly fell. On the day following, the temperature, in some cases, was unusually low. In one case, after an injection of one centigram, the fever lasted for two and a half days. The accompanying symptoms were pains in the extremities, headache, flushing, sweating, dyspnœa, irritable cough, increased expectoration and pains in the side of the chest, not so decided, however, as in the reaction of tuberculous patients. Cough was absent in several cases of bronchitis. In two cases, the spleen was enlarged. There was increased frequency of pulse and respiration in proportion to the elevation of temperature. In three cases, in which pus was present, reaction followed upon small doses. A patient with cystitis, in whom there was no reason to believe that tuberculosis existed, reacted promptly to each of ten injections, decided improvement in the local disease taking place.

It is to be regretted that a number of perfectly healthy persons could not be secured for making the investigations. It also remains, of course, an open question

if patients who react to the injections may not have in some part of the body a latent tuberculosis—although to assume this is a pure hypothesis.

It must not be forgotten that the Koch fluid is a potent agent—for good or ill—in the administration of which the greatest discretion should be observed. Extravagant claims should not be made for it, nor should it be condemned merely because injudiciously used. Our own opinion is that it is of no real value as a therapeutic agent, although—as we stated in our first comment on it—we would be glad, for the sake of humanity, if the judgment should prove to be erroneous. It is a curious fact that in the only case, so far as we know, which has been claimed as a "cure" in Philadelphia, the patient died in the Philadelphia Hospital on March 6, a hurried *post-mortem* examination being made by the attending surgeon without securing the presence of the Pathologist of the Hospital.

TREATMENT OF ANEMIA.

It should always be borne in mind that anemia is a symptom. When the removal of the condition which gives rise to it is possible, this should be the first step in the treatment, and it alone may suffice to dissipate the anemia. Sometimes, however, the causative factor eludes detection, or it may be that the disease to which the anemia is due is beyond the reach of treatment. Under these circumstances, the anemia, as such, must be directly attacked. The *Deutsche Medicinische Wochenschrift*, January 29, 1891, contains a brief paper by Dr. Laache, presented to the Section on Internal Medicine, at the Tenth International Medical Congress at Berlin, in which are laid down the lines of treatment of the various forms of anemia.

If worms are present in the intestinal canal, if hemorrhage or other wasting discharge exists, if digestion is impaired, these conditions should receive appropriate attention. For the simple anemias and for chlorosis, in which there is deficiency both of red corpuscles and of hemoglobin, iron is the best remedy. A favorite form in which to administer iron is as Blaud's pill, containing equal parts of dried sulphate of iron and carbonate of potassium. For cases to which this is not suitable, or in which it is not well borne, the lactate or the carbonate of iron, or a solution of the albuminate, may be prescribed, or a soluble salt may be injected subcutaneously. A most important point in the administration of iron is that it must be continued persistently, for long periods, it being remembered that the number of corpuscles is restored to the normal long before the proportion of hemoglobin. Next in importance to iron is arsenic, which has a special application in the treatment of pernicious anemia, in which there is a diminution in the number of red cells and in the total amount of hemoglobin, although the individual red corpuscle contains a relative excess of hemoglobin. To arsenic is also ascribed the property of diminishing the number of white corpuscles, which ought to make it a valuable remedy in the treatment of leukemia.

Of other remedies recommended for the treatment of anemia, many are of doubtful value, while, of a few, some good may be expected in individual instances. Among the latter may be included: transfusion of blood or solutions of common salt, subcutaneous injection of blood, and inhalations of oxygen. Of all the means proposed, the most astounding, perhaps, is blood letting, which, in a few reported cases, is said to have given satisfactory results.

The general management in a case of anemia is not to be neglected. Light and pure air should be provided for. Passive or gentle active exercise in the open air, avoiding fatigue, is to be commended in most cases of ordinary anemia. In pernicious anemia, however, rest in the recumbent posture should be insisted upon; while in intense anemia following hemorrhage,

and in chlorosis, such rest—at least for a time—acts beneficially. In cases in which heat production has not sunk too low, judicious treatment with cold water has a tonic effect. Sea-bathing must be undertaken with extreme caution, and the dietary should not be arranged with a view to the production of fat, but should consist largely of meat, so as to supply the material from which blood corpuscles can be made.

With these general suggestions, it would not be hard for any medical man to arrange a plan of treatment suited to almost any case of anemia, remembering always that the end to be accomplished is to lay up for the patient a stock of vigorous blood which shall support and not drain the tissues through which it circulates.

TREATMENT OF ASTHMA IN CHILDREN.

Dr. Blache, in the *Bulletin Medical*, January 14, 1891, points out the indications in the treatment of asthma occurring in children. At the onset of the attack, inhalations of the smoke from burning leaves of belladonna, hyoscyamus or stramonium, from nitre paper, inhalations of oxygen or of iodide of ethyl, should be tried. These failing, a hypodermic of a little morphine will at once relieve the dyspnœa. Morphine, however, must be used with great circumspection in children. Belladonna, on the other hand, is well borne, and its use may be continued for a long time. A sixth of a grain of the powder or a sixth of a grain of the extract may be given daily. The tincture of lobelia is well borne in large doses. Beginning with twenty drops, the dose may be gradually increased to three drachms in twenty-four hours. Good results have been obtained with the tincture of grindelia robusta, which has also been said to be a specific in whooping-cough. From fifteen to twenty drops may be given at a dose. Inhalations of the vapor of pyridin, as recommended by Sée, mitigate the severity of the paroxysm.

In the curative treatment, the iodides, and especially the iodide of potassium, hold the first place. Their efficacy depends upon an influence upon the brain and medulla, regulating nervous discharges. If the iodides are not well borne or if symptoms of iodism occasion annoyance, tincture of grindelia, arsenic, or inhalations of pyridin or of compressed air, may be substituted.

If the asthma be the result of a diathesis of rheumatism, gout or malaria, or due to disease elsewhere, as in the nose or pharynx, treatment must first be directed to these etiological factors.

To these suggestions may be added a reference to the recommendation of euphorbia pilulifera made by Dr. M. Graham Tull, in the MEDICAL AND SURGICAL REPORTER, March 16, 1889, and May 18, 1889. This drug seems to have a powerful influence upon the course of asthma.

BOOK REVIEWS.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the REPORTER.]

THE TIME RELATIONS OF MENTAL PHENOMENA. By JOSEPH JASTROW, Professor of Psychology at the University of Wisconsin. pp. 60. Fact and Theory Papers. New York: N. D. C. Hodges, 1890.

The title of this work is sufficiently indicative of the nature of the subject discussed. A careful digest of the literature, with abundant references, is given. The outcome of investigations of this kind is in the direction of facilitating and shortening mental processes and improving methods of education.

The publication will have an interest for physiologists and psychologists.

A MANUAL OF AUSCULTATION AND PERCUSSION. Embracing the Physical Diagnosis of Diseases of the Lungs and Heart, and of Thoracic Aneurism. By AUSTIN FLINT, M. D., LL. D., Professor of the Principles and Practice of Medicine and of Clinical Medicine in the Bellevue Hospital Medical College, etc., etc. Fifth Edition. Thoroughly Revised by J. C. WILSON, M D., Lecturer on Physical Diagnosis in the Jefferson Medical College, etc., etc. 8vo, pp. 268. Philadelphia: Lea Brothers & Co., 1890. Price, $1.75.

Little need be said of a book which has passed through five editions. Of course physical diagnosis can be taught practically only on the living subject. It is impossible to convey adequate ideas of sensation or sound by description, but in conjunction with actual examination a systematic work renders valuable service. Of course, it must never be forgotten that

physical signs are but evidence of physical conditions. Alone they do not establish the diagnosis. In illustration, let us quote as to crackling sounds. They "are not uncommon in healthy persons, at the end of forced inspiration. The fact of their presence at both summits, and the absence of other morbid signs, are the grounds for not considering them as evidence of disease. They are found in health, especially if the binaural stethoscope be employed." Let the student beware of pathognomonic signs and symptoms.

Little is said of functional or hemic murmurs, often described in the course of anemia. We cannot reconcile ourselves to the commonly accepted explanation of these as due to changes in the blood; unfortunately, however, without being able to present a better one. A murmur may be generated by certain peculiarities of the channel through which fluid passes, giving rise to variations in resistance. It does not seem plausible, on the other hand, that variations in the density of the circulating medium should occasion adventitious sounds. We should look for the explanations of these so-called functional murmurs in some transient relation between circulation and respiration.

The little volume commends itself to students and physicians, and its revision by so careful a diagnostician and practitioner as Dr. Wilson enhances the value which is guaranteed by the name of its author.

A PRACTICAL TREATISE ON IMPOTENCE, STERILITY AND ALLIED DISORDERS OF THE MALE SEXUAL ORGANS. By Samuel W. Gross, A. M., M. D., LL. D., Professor of the Principles of Surgery and Clinical Surgery in the Jefferson Medical College, of Philadelphia, etc., etc. Fourth Edition. Revised by F. R. Sturgis, M. D. pp. 173. Philadelphia: Lea Brothers & Co., 1890. Price, $1.50.

This work of the younger Gross is too well known to require extended comment. It has already taken its place among the classics on the subjects of which it treats. While medical literature teems with treatises on diseases of the female generative apparatus, prior to the work of Gross the derangements of the male sexual organs was by English writers a comparatively untrodden field. Even yet, probably, the general practitioner is as uninformed on this subject as though it were some obscure specialty. The work in question has done much to clear the medical atmosphere of a good deal of doubt and uncertainty. The numerous additions and comments of the reviser have been interpolated in the text in brackets. The general practitioner would be well repaid by a careful reading of a treatise which handles in a practical way subjects so common to every-day experience.

Correspondence.

Electricity and Pelvic Surgery.

To the Editor:

Sir: In an article read before the Mississippi Valley Medical Association, 1890, Dr. Sutton says: "These teachings are rapidly becoming ancient history, despite the desperate efforts and exaggerated statements of the advocates of electricity as a curative agent. In regard to the latter, men who did not own a battery, and who had never seen a fibroid tumor removed by an electric current, have written elaborate articles on the subject. Happily for the surgeons, who had about arrived at a consensus of opinion in the surgical methods in the treatment of these cases, these 'lightning bugs' have become in recent months less numerous."

This is sensible talk, with which no logical fault may be found. It is well for the science of gynecological electro-therapeutics that the unfitted and unlettered should drop out. That a man who never owned a battery, and who never saw a fibroid tumor removed, should make blatant claims for something of which he knew nothing, can be equalled only by the equally blatant condemnation of the surgeon who never owned a battery and who never saw a tumor removed. It *is* fortunate for medical advance that such as these should have screamed themselves so hoarse that their voices are no more heard in the land.

In the discussion of this paper, Dr. L. S. McMurtry, of Louisville, said: "Of late, electricity has been much vaunted in the treatment of fibroid tumors of the uterus. Dr. Sutton merely mentioned this agent in his paper, probably purposely, because he knows that electricity does nothing towards arresting or removing these tumors. A peculiar feature about the application of electricity in pelvic surgery is that those who a few years since denied the existence of certain forms of intra-pelvic disease are now foremost in the diagnosis and treatment of these same diseases by electricity. The application of electricity by puncture is fraught with great danger. The speaker has removed a uterine myoma by supra-vaginal hysterectomy, weighing sixteen and a half pounds, in which the entire anterior aspect, which had been accessible to electric treatment, was bound by dense adhesions to the omentum, intestines and abdominal wall, etc., etc."

Now there happens to be some peculiar points in this argument, which are salient characteristics of all similiar arguments made by exclusive laparotomists, which are interesting bits of contemplation. I will first number the *curios*, and then take them up separately for examination.

1. "Dr. Sutton merely mentioned this agent," etc., etc.

2. "A peculiar feature about the application of electricity," etc.

3. "The application of electricity by puncture is fraught with great danger."

4. "The speaker has removed a uterine tumor," etc.

1. Dr. Sutton, if acquainted with the statistics and history of gynecological electrotherapeutics, will not feel flattered at this surmise. The unimpeachable cases on record in which tumors have been arrested by electricity, are numerous and quite as reliable as are any statistics ever brought forward by any surgeon. If Dr. McMurtry does not know this—his argument would be akin to that of a "lightning bug" who never owned a battery—if he does know that such claims are made, but refuses to accept them because they antagonize pet theories of his own, it is not polite to give utterance to such doubts, since men of equally honorable standing with himself have seen and reported such cases. I have seen quite a number "reduced," and so can any one else see these cases if he will. I have never seen a fibroid *disappear entirely*, but other men have, and I believe them. It is "foolish talk" to reiterate all this, because all of it is a *fact*.

2. In no branch of medicine has a greater change taken place then in the pathology of female pelvic disease. What became of all of these modern high-sounding diseases, and of the women who had them, before the modern laparotomist was incubated? Who condemned abdominal surgery, not very long ago, but the surgeons themselves? Did women die of these diseases then, as they are dying since laparotomy has become a fashionable "*fad?*" It *is* nice of the doctor to give the "lightning bugs" credit for recognizing and diagnosticating these troubles, early in their history, and for establishing a conservative system of treatment.

3. This objection is a mere will-o'-the-wisp of the doctor's fashioning. I am speaking, of course, of a puncture in the hands of those competent to make use of it. In the clinic, conducted by Dr. Massey and myself, cases are punctured, high intensities being used, and the patients go to their homes one half hour afterwards. I do not advise this, but with such absolutely poor people, and with no beds at our disposal, we have no alternative. I *have never seen* any bad results following a fibroid puncture, and my experience has been an ample one. But even were it possible to show that such a process is attended with danger, what is the value of such an objection? Is not laparotomy—the alternative—a dangerous operation.

4. Dr. Baldy, than whom no man of equal age stands higher in the surgical literature of this country, told me only a few days ago, that he very rarely if ever had opened the abdomen for the removal of tumors, without finding extensive adhesions, and that a large majority of so-called pus tubes were simply cases of chronic adherent salpingitis. So that all this rumpus about adhesions amounts to nothing. Of course they are adherent—these big tumors—how could it be otherwise, and by what process of ratiocination does one reach the conclusion that adhesions are engendered by electricity?

In the *British Medical Journal*, Feb. 7, 1891, Drs. Williams and Champneys (see *Medical News*, Feb 21, especially the few introductory words of the editor) have an article on "The Operative Treatment of Chronic Disease of the Uterine Appendages" which merits careful reading. In the *Lancet* of January 31, 1891 (quoted in the MEDICAL AND SURGICAL REPORTER, February 21) will be found Sir Spencer Wells' reply to Mr. Lawson Tait. This is also most edifying reading. It might appear to a student of medicine as if the accusation of exaggeration, overstating the case, etc., etc., was really one which applied most directly to the surgeon. Sooner or later there must be reaction in favor of the protection of a woman's pelvic appendages. The time is surely near at hand, for the tread of its march can be heard even now, when it shall be criminal for the surgeon to boast of his recklessness in abdominal work, or to demonstrate before any society a "bucketful" of ovaries and tubes. It is a travesty to call this science, it stultifies intelligence to call it good surgery, and it outrages refinement and common sense to make such exhibitions. It is inexact to claim that operations of this kind cure the patient, when just the reverse is often the case. Many a woman suffers more acutely for years after such an operation than she did before it. I am glad of anything that cries a halt to it, and I am very especially glad that electricity has arisen to show us a better, safer and more conservative plan of treatment, and that the "lightning bugs" have been largely responsible for stemming the tide and turning it in another direction.

Yours truly,

HORATIO R. BIGELOW, M. D.

Phila delphia.

Notes and Comments.

Solution of Shurley and Gibbes for Tuberculosis.

Dr. J. E. Clark, Professor of Chemistry and Physics. Detroit College of Medicine, gives in the *North American Practitioner*, February, 1891, the following account of the manufacture of the solutions recommended by Drs. Shurley and Gibbes.

The main difficulties encountered were the tendency of the gold solution to reduction, and the formation of abscesses following the iodine injection. It was found that both these obstacles were removed by scrupulous cleanliness in all manipulations, and securing absolute purity of the chemicals used. It is an unfortunate fact that the so-called C. P. chemicals, are often so only in name, and that the chemist who wishes to succeed must be an adept in purifying or manufacturing his own. In toxicological analysis where the purity of the reagents is of supreme importance, Dr. Clark has frequently found chloroform, ether, alcohol, etc., bought from good houses, containing impurities. which if undetected might easily have led to erroneous conclusions.

In making the solution of gold and sodium, the first step is the preparation of pure gold. Dr. Clark takes an English gold coin of recent date, which is composed of one part of copper and eleven parts of gold, and thus avoids the trouble of an insoluble chloride of silver which sometimes interferes where the alloy consists of part silver; to the coin in small pieces he adds eight parts of nitro-hydrochloric acid (four parts hydrochloric to one part nitric acid) chemically pure. This solution is then evaporated on the water bath with an excess of hydrochloric acid to nearly dryness, it is then treated with hot water and filtered to separate any chloride which might be present. To this solution is added a solution of pure oxalic or formic acid which will cause the precipitation of any gold which is present, in the form of a brown or greenish-black powder, in from one to forty-eight hours.

This powder is collected and boiled in dilute hydrochloric acid Sp. gr. 1.1, and then washed and dried. To the powder is added eight parts of nitro-hydrochloric acid and the solution evaporated on the water bath to nearly dryness, and allowed to crystallize. Too much heat here or too long evaporation is apt to give an aurous or an acid chloride $AuCl$ or $AuHCl_2$, either of which must be avoided. The result, if the manipulation be properly conducted and the water of crystallization driven off, leaves ruby red prismatic crystals, and not the orange red crystalline needles of commerce.

The next step is the manufacture of the chloride of gold and sodium. The common salt usually contains portions of $CaCl_2$, $MgCl_2$, and $CaSO_4$. Dr. Clark either makes the salt from an anhydrous carbonate and hydrochloric acid, or dissolves it in four times its weight of pure water and adds to the filtered solution first $BaCl_2$, and then $MgCo_3$, as long as any precipitate falls, filters and evaporates very slowly, skimming off the first crystals that form and rejecting them; those forming last are the pure salt.

Take of the gold chloride 85 parts, and the Na Cl 16 parts and mix each separately in a little pure water, stir together and allow to crystallize at a low temperature, which will give orange colored rhombic prisms. Similar precautions are necessary in the preparation of the iodine solution, as the iodine of commerce all contains more or less impurities, in the shape of graphite, chlorine, oxide of manganese and crude antimony. To prepare it perfectly pure on a small scale, place some in a small deep porcelain scale or earthenware dish, and cover it air-tight with a glass matrass filled with cold water, and apply to the dish a temperature of about 100 C. for two or three hours, allow to cool and the sublimate will be found attached to the under surface of the matrass. It is best, however, to expose the matrass after about 20 minutes' exposure to the heat and look for acicular prisms of a white color and pungent odor, if these are present they should be scraped off with a glass rod and rejected, afterwards the sublimation is to be carried on until it is complete. The fresh iodine is then to be kept in glass stoppered bottles.

To make a non-irritating solution of the iodine for hypodermic use it was found necessary to combine it with water and glycerine. This is accomplished through the medium of potassic iodide. A sufficient quantity, to just produce solution is added to the water and iodine. The glycerine is subsequently added. To purify the potassic iodide which contains a carbonate and iodate it is only necessary to dissolve in ethylic alcohol and filter. The carbonate and iodate are both insoluble in this solvent.

There are details in the way of manipulation which have not been mentioned, but these will occur to any one qualified to undertake their manufacture. Sterilized distilled water is used in all operations.

The question may arise as to why so much care is required in the manufacture of the solutions, and what harm can arise from the presence of minute quantities of organic matter or impurities? It has been found that the smallest quantity of organic matter in the gold solution will produce reduction on its exposure to light, whereas, if made in this manner it can be exposed to the light indefinitely. If a solution of nitrate of silver be made with like precaution it can be exposed in a clear glass bottle to direct rays of sunlight without change, showing that organic material is responsible for the reduction.

The chemical impurities in ordinary mixtures of these substances appear to me to have been the cause of much of the irritation and the abscesses which followed the primary experiments, as, since greater care has been exercised in the manufacture of the solutions, not a single abscess has been reported. During the last month Dr. Clark has supplied a large number of physicians, in the United States and in Canada, with the solotion, without receiving one complaint.

Pain in some cases is said to follow the injection. This can be mitigated by being careful not to inject too deeply, if the muscle is reached pain often follows. Any dilution of the gold solution, unless with sterilized water, will produce a precipitate of the metallic gold.

On Dietetics of Chronic Nephritis.

In a preliminary note in the *Vratch*, No. 39, 1890, p. 889, Dr. Nikolai S. Zasïadko, of St. Petersburg, describes a very interesting group of elaborate clinical experiments which he has carried out in order to elucidate the influence of vegetable, animal and mixed dietary on albuminuria, the arterial tension, pulse, dropsy, temperature, body's weight and general nutrition in patients suffering from chronic Bright's disease. In all, ten patients were selected for the purpose. In each case the observation lasted a month, being divided into three equally-long periods, during one of which the patient was kept on a pure vegetable diet; during the second on an animal diet (with addition of bread, from 50 to 200 grams a day), and during the third on a mixed one. The following are the main deductions drawn by Dr. Zasïadko from his researches.

1. Under the influence of a *vegetable* dietary, the daily quantity of albumin in the urine considerably decreases, the arterial tension is lowered, dropsy markedly increases, the pulse becomes slower, weaker and more easily compressible, the patient's general objective and subjective state grows worse (there appear general weakness, listlessness, disinclination to movements, etc.), the appetite gradually disappears.

2. Under the influence of an *animal* diet, the daily quantity of albumin in the urine markedly increases, the arterial tension rises, dropsy decreases, the pulse becomes more frequent and fuller, the bodily weight decreases *pari passu* with the disappearance of œdemas, the daily amount of the urine, its proportion of solid constituents and specific gravity increase, the patient's general state markedly improves (the patient becoming cheerful and stronger, inclined to exercise, etc.).

3. A *mixed* dietary stands midway between a vegetable and an animal one, but comes nearer to the latter, as far as its influence on albuminuria is concerned.

4. The most prominent symptom of chronic nephritis is constituted by a morbid alteration of the blood which is characterized by an increased proportion of water and a decreased one of proteids, hemoglobin and morphological elements. Hence, to restore the normal properties of the blood and to improve the patient's general nutrition, it appears necessary to keep him on a liberal diet abounding in proteids. All apprehensions concerning the development of uremia from such regimen are void of foundation.

5. Contrary to various theoretical objections, brought forward by Lépine and Senator, animal food (butcher's meat, etc.,) does not cause any renal irritation in chronic nephritis and does not give rise to any exacerbation of the chronic renal process. In acute or subacute cases, however, the dietary can be resorted to only with certain caution.

6. An abundant proteid food usually augments the proportion of albumin in the urine, causing the so-called "dietetic albuminuria" (which, however, swiftly disappears on decreasing the proportion of proteids in the patient's food). In view of the fact, the said proportion of albumin alone cannot afford a criterion for appreciating the grav-

ity of the renal process. The patient's dietary must be always also taken in due consideration.

7. In chronic cases, a moderate exercise increases albuminuria but to a slight extent. Hence it can and must be allowed to such patients.

8. According to modern scientific teachings (Gull and Sutton, Dickinson, Meigs, Johnson, Rayer, Küskoff), chronic Bright's disease constitutes a general affection of the vascular system (and not a local lesion of the kidneys alone, as was formerly thought and taught). Hence, the practitioner of nowadays cannot possibly limit his efforts solely to controlling albuminuria, but must strive to improve the patient's general nutrition by means of an appropriate diet. Only such treatment can lead to improvement in the nutrition of the renal tissues.

9. The best dietery for chronic nephritic cases consists in a mixed (animal and vegetable) food. In chronc interstitial nephritis, accompanied by a general weakness, an animal food should predominate in the dietary, while in chronic parencymatous nephritis vegetable food articles with milk should be in a relative excess.

10. Cooked or roasted Italian chestnuts markedly lower the proportion of albumin in the urine, which is, probably, dependent upon their containing tannic acid.

Starvation and Disease.

The importance of nutrition in the treatment as well as in the prophylaxis of disease has been recognized more especially since the time of Graves. It has long been known that hunger and deprivation increase the predisposition to disease.

The *Centralblatt für die Medicinischen Wissenschaften*, January 10, 1891, quotes from *Fortschritte der Medicin*, Nos. 18 and 19, 1890, the conclusions arrived at by Drs. Canalis and Morpurgo as a result of investigations conducted at the bacteriological laboratory at Rome. Pigeons, chickens and white rats, which enjoy a relative immunity to anthrax, were inoculated subcutaneously with anthrax, food being withdrawn before or after the operation.

It was found that pigeons normally enjoying immunity died of anthrax if food was withdrawn simultaneously with making the inoculation. Pigeons which had been starved for six days did not become infected if they were again fed immediately after inoculation; but were infected, as a rule, if they had been starved for a period longer than six days. If food was withdrawn at the time of operation and resumed in two days, the disease was not aborted, though its progress was retarded. Thus it is seen that in pigeons the loss of immunity from anthrax is related rather to interruption in the circulation of nutritive material than to mere wasting of the tissues. If food was withdrawn on the eighth day after inoculation the animals still died of anthrax, a proof that the germs introduced may continue to live for a number of days in the organism and remain virulent. The loss of immunity for anthrax in starving pigeons is not to be explained by the reduction of temperature which takes place, as infection does not follow inoculation if the animals are kept in a bath at a correspondingly low temperature but at the same time are well fed.

To determine whether profound lesions of the digestive apparatus had any influence upon natural immunity, the pancreas, or portions of it, were removed. In these cases, the pigeons were, as a rule, susceptible to anthrax for a short time.

Chickens also became susceptible to anthrax by starvation. Most of the animals died if the inoculation was preceded for from three to seven days by withdrawal of food. In contrast to the pigeons, the chickens retained immunity if the starvation was begun just after inoculation.

White rats remained unsusceptible to anthrax infection in spite of starvation.

[These experiments are of a class which deserve reprobation. The point sought to be established is one which any intelligent man would consider *à priori* highly likely, and which has been abundantly established by clinical experience. The experiments of Canalis and Morpurgo were useless and cruel, and we mention them only to condemn them.—Editor of Reporter.]

Tritopine.

Merck's Bulletin, February, 1891, says: Tritopine ($C_{42}H_{54}N_2O_7$) is a new alkaloid discovered in *opium* last year by Dr. Kauder, chemist in E. Merck's Laboratories at Darmstadt.

Tritopine, a strong base, neutralizing mineral acids, occurs in opium in still smaller quantities than Protopine, recently

described in that journal. It melts without decomposition at 182° C. [359 F.]. It is easily soluble in chloroform, but only with difficulty in ether. It crystallizes from alcohol in beautifully formed transparent prisms—each part of the alkaloid requiring, for solution, about 40 parts of boiling absolute alcohol.

Most of its salts are very easy soluble in water and in alcohol, as for instance the *hydrochlorate*, *sulphate*, *nitrate* and *acetate*. The *bin-oxalate* and *hydro-iodate* are crystalline. The latter is rather poorly soluble in water.

In regard to the toxic properties of tritopine, Dr. Kobert says that, like most of the opium alkaloids (for instance: Thebaine, Papaverine, and others), it exercises a spastic action, *in the manner of strychnine;* so that its application as a narcotic appears to be precluded. When given in lethal dose, its final action is exactly like that of strychnine—that is, *tetanic*.

Army Medical Board.

An announcement was recently made that an Army Medical Board would be in session in New York City during April next for the examination of candidates for appointment in the Medical Corps of the United States Army, to fill existing vacancies. At the time of that announcement there were only five vacancies to be filled. Recent Congressional legislation has, however, permitted the retirement of certain officers, so that there are now fourteen vacancies in the grade of assistant surgeon, with the probability that the number will be increased to seventeen by the time the examining board begins its labors.

As already stated, persons desiring to present themselves for examination by the Board will make application to the Secretary of War, before April 1, 1891, for the necessary invitation, stating the date and place of birth, the place and State of permanent residence, the fact of American citizenship, the name of the medical college from which they graduated, and a record of service in hospital, if any, from the authorities thereof. The application should be accompanied by certificates based on personal knowledge, from at least two physicians of repute, as to professional standing, character and moral habits. The candidate must be between 21 and 28 years of age, and a graduate from a Regular Medical College, as evidence of which, his Diploma must be submitted to the Board.

Further information regarding the examinations may be obtained by addressing C. Sutherland, Surgeon-General U. S. Army, Washington, D. C.

Meeting of the National Association of Railway Surgeons.

At the Kansas City meeting of the National Association of Railway Surgeons last year, it was decided to hold the next meeting at Buffalo May 7, 8 and 9 of this year. But, on account of the meeting of the American Medical Association being set for the same time, it has been decided to change those dates, and to hold the next meeting at Buffalo April 30 and May 1 and 2. To this meeting all Railway Surgeons are cordially invited. Railway Surgeons sending their names and addresses to the Corresponding Secretary will have a copy of the Constitution and Programme sent to them. Those wishing to read papers should send in the titles of their papers without delay. For further information inquiry should be made of A. G. Gumaer, M. D., Corresponding Secretary, Buffalo, N. Y.

Lion Flesh for Food.

The lion is eaten by some African races, but its flesh is held in small esteem. The Zulus find carrion so much to their liking, that, according to the late Bishop Colenso, they apply to food peopled by large colonies of larvæ the expressive word "uborni," signifying in their uncouth jargon "great happiness." David Livingstone, that keen and accurate observer, reminds us that the aboriginal Australians and Hottentots prefer the intestines of animals. "It is curious," he says, "that this is the part which animals always begin with, and it is the first choice of our men." On this point it may be well to remind the civilized reader that the woodcock and the red mullet, or sea woodcock, are both eaten and relished without undergoing all the cleaning processes which most animals used for food among us generally experience to fit them for the table; so that our aversion to the entrails of animals is not absolute, but only one of degree. The hippopotamus is a favorite dish with some Africans when they can get this unwieldy and formidable river monster, and when young its flesh is good and palatable,

but with advancing years it becomes coarse and unpleasant. The Abyssianians, the amiable people to whom, according to the Italian prime minister, his countrymen proposed to teach wisdom and humanity, find the rhinoceros to their taste: so they do the elephant, which is also eaten in Sumatra. Dr. Livingstone describes the elephant's foot as delicious, and his praises will be echoed by many travelers in lands where that sagacious monster still lingers in rapidly decreasing numbers. "We had the foot," wrote the doctor, "cooked for breakfast next morning, and found it delicious. It is a whitish mass, slightly gelatinous, and sweet like marrow. A long march to prevent biliousness is a wise precaution after a meal of elephant's foot. Elephant's tongue and trunk are also good, and, after long simmering, much resemble the hump of a buffalo and the tongue of an ox; but all the other meat is tough, and, from its peculiar flavor, only to be eaten by a hungry man." —*Science*, February 6, 1891.

Nu Sigma Nu Fraternity.

The annual convention of the Nu Sigma Nu fraternity was held at the Wayne Hotel, Detroit, February 13. The society bears the same relation to medicine that the Sigma Phi does to the law, being an under-graduates' secret order, which has chapters in several of the larger cities. The business of the convention in the afternoon, which was presided over by Dr. Waldo E. Clark, retiring grand Æsculapius, consisted of some revisions of the constitution and by-laws, and the election of the following officers for the ensuing year: Grand Æsculapius, R. E. L. Rogers, M. D., Pittsburgh, Pa.; Grand Galen, John L. Irwin, M. D., Detroit; Grand Herophilus, Don M. Campbell, M. D., Detroit; Grand Malpighi, Charles D. Strong, M. D., Brooklyn, N. Y.; Grand Hippocrates, F. W. Robbins, M. D., Detroit.

In the evening the Beta Chapter, of Detroit, gave its first annual banquet, at which the visiting delegates were present as guests.

Salol and the Naphthols.

The *Chemist and Druggist*, February 7, 1891, says: V. Demandre, a pharmacist of Dijon, recently read before his departmental pharmaceutical association, an interesting note suggested by what was at first a mere prescription difficulty. Some time since, he received the following prescription:

℞ Salol . . . . . 0.50 grams
Naphthol alpha . . . . . 0.10 "
For one cachet, send ten such.

On rubbing together the two chemicals in a mortar, a pasty mass resulted, turning to a thick oily liquid. The physician having been notified of the occurrence, the naphthol was left out of the prescription. But the Dijon pharmacist thought the case was worth looking into a little further. Instead of alpha naphthol, he tried beta naphthol with salol in the same proportion as before, and observed that the mixture remained a dry powder. (1) Hence his conclusions that salol is incompatible in powders with alpha naphthol, but quite compatible with the beta variety. (2) That the reaction, a very simple one, will be found useful to distinguish the two naphthols, as dealers are apt to sell one for the other, although their properties are far from being the same.

Mississippi Valley Medical Association.

The Mississippi Valley Medical Association will hold its seventeenth annual session at St. Louis October 14–16, 1891. A large attendance, a valuable programme and a good time are expected. The members of the medical profession are respectfully invited to attend.

For Painful Hemorrhoids.

One is sometimes sorely tried for the means of relieving the pain, tenemus and itching of turgid hemorrhoids. Alvin (*Fortschritte der Krankenpflege*, January, 1891) states that a sponge saturated with water at a temperature of from 127° to 140° F., applied several times daily to the anal region, will mitigate these symptoms.

Notice to Surgeons of the National Guard.

Dr. Senn, of Milwaukee, Surgeon-General of Wisconsin, is desirous of obtaining the name and address of every surgeon of the National Guard in the United States for the purpose of taking the necessary preliminary steps towards the formation of a permanent National Association.

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Clinical Lecture.

ACUTE SUPPURATION OF THE MIDDLE EAR IN INFANCY.[1]

BY B. ALEX. RANDALL, A. M., M. D.,

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Gentlemen: This infant with a muco-purulent discharge from the ear which I now bring before you, suggests many points of importance for our consideration. The coryza, with which its trouble began, is now largely past, but enough of it remains to indicate the truth of the history which is given and to point to the need of nasal treatment. The skin about the ear, as well as on the walls of the meatus, is somewhat excoriated by the discharge; and gives its indication for the most scrupulous cleansing and the use of an emolient and protecting ointment. The tenacious character of the discharge tells us that our best efforts will probably fall short of complete evacuation of the drum cavity from which it comes—for I need hardly remind you that only from the middle ear could this mucus be derived, since there is no mucous membrane in the external canal—and the large admixture of mucus indicates that the alteration of the tympanic lining is not extreme. From this it follows that the collection within the drum-cavity has probably exerted little destructive action upon the drum-head, has forced its way through it only after great distention, and that the perforation is only a separation of the fibers, not a clear, clean hole. A tiny pouting point through which drops of sticky discharge slowly exude is what we are to expect to see when we have cleansed the canal; and even in this expectation we may be disappointed, for the opening may be so inconspicuous that we shall fail to discern it through the narrow swollen canal, into which strong illumination with mirror and speculum seems to penetrate but poorly.

Inspection confirms the anticipation. The perforation is recognizable only by the bead of discharge which protrudes from it and stretches into a long string as I try to wipe it away; and now, hanging from it, serves to locate the invisible opening. Spraying the nares clear with Dobell's solution, and making an application of weak glycerole of tannin with the bent applicator above the soft palate—as much to sweep away any collections there as to obtain any astringent effect—we can inflate the tympanum with the Politzer bag, unimpeded by secretion in the naso-pharynx. As a result we find a new quantity of glairy discharge mixed with air bubbles in the auditory canal, and in removing it can draw away another string protruding from the perforation; after which repeated inflation forces the air through with a fine crackling râle. Light dusting of the bottom of the meatus with boric powder furnishes a slightly astringent and disinfecting dressing; and we will direct the mother to return to-morrow, syringing the ear meantime if any discharge appears. To the excoriated skin we apply an ointment of calomel in vaseline, and could do the same to the nasal mucous membrane; but will employ the gentler procedure of spraying with a protective film of fluid cosmoline, and lightly insufflating the calomel.

At the next visit we may expect to find further decrease of the coryza, a less inflamed auditory canal and perhaps a slight diminution of the discharge. On this last we can hardly yet count. The affection has probably quite a course yet to run; and unless we enlarge the opening in the drum-membrane greatly, so as to gain free access

[1] Delivered at the Philadelphia Polyclinic.

to the inflamed surfaces or adopt other rather heroic methods of treatment, we cannot expect to cut short the attack. With careful watching these simpler measures will doubtless suffice to guide the case to an early and safe termination; so we will hold the more energetic measures in reserve unless more urgent symptoms arise. The nutrition must be looked to, for upon it the satisfactory resolution largely depends; but any medication that might impair digestion is hazardous. In some of these cases inunction with cod-liver oil has distinct value, as combining food, tonic and protection against renewed cold-taking.

Turning a moment from the pathological aspect of this case, I will ask you to study with me some important anatomical points which it brings before us—and this the more especially because the text-books would generally lead you astray. You know that in the new-born infant the annulus or tympanic bone, in the groove of which, as in a frame, the drum-membrane is set, is a separate and distinct bone, forming part of the lower outer surface of the skull. The drum-head, therefore, like the fontanelle, is a portion of the surface of the head, as this specimen shows. But do not imagine, as too many do, that it is to be found immediately within the mouth of the auditory canal. When I pass the cotton-tipped probe down into contact with it, you see that it is about an inch and a quarter in—as deep as in the adult. The external auditory meatus is nearly as long, then, in the infant as in the adult; and, being usually narrower, it is more difficult to illuminate its depths and study the conditions at its bottom. A part of this difficulty is owing to the fact that in the absence of a bony canal there is a much greater tendency of the walls to fall into contact—a tendency which is present only in the outer, cartilaginous portion of the adult canal. To see into the auditory canal, you are instructed to draw the auricle up, back and outward—this serving to straighten out the curves which it naturally assumes in adult life. But you will find this will not do in the infant: the canal is only rendered narrower and more curved by such traction. The drum-head is, at this period, well under the base of the skull, and the meatus extends upwards along the curve of the squama as it passes out. We must draw the auricle *down*, then, in the young child, in order to straighten and dilate the tube through which we are to see; and many fail in their study from not doing so. The auricle must be well drawn down in order to bring the external orifice to the level of the drum-membrane; while in the adult you will find that the axis of the canal almost always tends upwards—that the tympanic end is the higher.

Here we have an explanation of the statement made in almost all of the text-books that the inclination of the drum-head is greater in the infant—that it is more horizontal. Politzer alone, so far as I recall, states the contrary, basing his view on the careful anatomical studies of the point made by Pollak and himself, although Roosa doubtfully accepts this. As you look again at this infant skull with its drum-membranes close together under the base, so that their extreme inclination is conspicuous, it is hard to believe that this does not represent a condition wholly unlike what we daily see in the full-grown state. As seen clinically, the drum-head seems nearly at right angles to the axis of the canal through which we view it, and we must constantly disabuse our minds of this impression. It is hard to believe the demonstration afforded by casts of the auditory canal, by sections of the entire organ or by good anatomical preparations—all agreeing in showing great obliquity of the adult membrane. But it is only by means of a preparation such as this, where the bony lower walls of the canals have been removed on both sides, so that you can see the tympanic membranes just as you do in the infant skull, that their relations to each other can be appreciated and their inclination actually measured. Then it is manifest that, as accurately as we can measure, there is no difference in the inclination. The adult membrane is exactly as near horizontal as the infant's. Great development has taken place in the sphenoid bone, with the general skull growth, pushing the tympana farther apart; the squamous and mastoid portions of the temporals are far larger, and even the petrous portions have apparently grown greatly. How, then, you may well ask, has it been possible that this relation has remained unchanged? Are these two specimens not merely accidentally similar exceptions, not typical examples.

The true relation is what is here shown. I can show you other preparations just like them; while I have never seen any to the contrary. Extraordinary as it may seem, there are some parts of the body which are

of full size at birth. Such are the labyrinth and the ossicles of the ear, and the drum-membrane can probably be included in the same list. A slight growth is perhaps usual in each of these structures; but it is so minute as to be doubtful; and it is even claimed that the ossicles are larger at birth than in later life. The tympanic membrane and the annulus in which it is framed undergo no noteworthy growth in extra-uterine life—marked as is the growth of adjacent structures; so there is no reason to expect that the inclination of the two membranes to each other or to the basal plane of the skull must undergo modification. The assumption of change is gratuitous, and falls at once to the ground when tested anatomically.

If, therefore, your examination of an infant's drum-head is unsatisfactory, the principal anatomical reason is probably to be found in the relative, and perhaps the actual, narrowness of the long canal, which is specially liable to inflammatory swelling. The tympanic membrane may appear small because you cannot see the whole of it—it may seem exceedingly oblique because you are looking at it from above rather than below the horizontal line (yet it must also be remembered that an opaque membrane, especially if much congested so as to be ill-defined, always shows its obliquity markedly) —its posterior portion, if there is secretion within, is apt to be so bulging as to hide the malleus-handle and short process—and any perforation is usually small and recognizable only by the drop of fluid occupying it and giving back a pulsating reflection, or by a protruding bead of more tenacious discharge, as in our present case. Yet the negative side of such a study is so important that it should never be omitted. Polyp formation is quite common in such cases, and is of the gravest importance in causing obstruction of the outflow, with all the consequent dangers to the mastoid and to the brain. Such growths must be promptly removed. The drum-membrane may be somewhat thickened, and the pressure within the tympanum may rise to a dangerous height from retained secretion without doing more than distend yet not rupture it. Paracentesis may then be exceedingly important. Cases may present all the symptoms of meningitis, with convulsions, paralysis and high fever, and yet yield promptly when a protrusion on the upper back wall of the canal, indicating collection in the mastoid antrum, has been discovered and incised. It is far better to foresee such conditions and combat them early, if possible; and a great aid to that end will be furnished by the inspection of which we have been considering the drawbacks and their avoidance. And when our inspection shows none of these conditions of grave omen, we have fair assurance that the case is one which can be safely guided by simple measures to a full and timely recovery.

In such cases, then, as the one before us, cleansing and protection are our needful measures. Cleansing sounds rather simpler and easier than it is in fact. The discharge is often of the tenacious character shown in this case, and both syringing and mopping with cotton are needed to clear the external canal. Even with the inflation of the tympanum, that cavity can be but partially freed of retained secretion; and the blowing in of air from the nose calls for cleansing of its cavities as a pre-requisite to an unobstructed and unpolluted entrance of air through the Eustachian tubes. The infantile tubes are short and wide, the naso-pharynx small; so there is rarely any difficulty in forcing the air into the drum-cavities. The Politzer bag with the olive-shaped tip forms the best inflation apparatus; and the child in crying will furnish all the aid required, such as the adult affords by raising the soft palate in swallowing. After this air-douche, any discharge is to be wiped away from the bottom of the external canal once more—a little mopping with peroxide of hydrogen may do this most thoroughly and perhaps penetrate the perforation, however small; then impalpable boric powder is to be blown in with the aid of a regular insufflator, or of one improvised from a quill. This dusting should be but sparing if the discharge is markedly mucous, for this will but slightly dissolve the powder; and the rule not to use insoluble powders may here include boric acid. Usually the boric powder may be freely used, even to the extent of packing the canal as full as this blowing in will do it; and while some claim that this method does not carry the powder to the bottom of the canal, the slightest observation will demonstrate to you that it does. This gives us an unirritating, aseptic, absorbent dressing, mildly astringent as it dissolves; and while little or none of it may penetrate into the tympanum, it still exerts no little influence on the inflammation. It should be renewed, after cleansing, as often as discharge appears externally. The infla-

tions are to be continued after all discharge has ceased, to further the restoration of the ear to its normal condition and function; and the nasal treatment is also to be maintained in order to forestall, if possible, a new involvement from this source.

COMMUNICATIONS.

PURPURA HEMORRHAGICA AND METRORRHAGIA.[1]

BY M. ANDERSON, M. D.,
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The case which I report is that of a young woman, 24 years of age, who is a "bleeder" in the fullest sense of the word. She bleeds freely from the nose, the stomach, the bowels, and from the uterus. She is both menorrhagic and metrorrhagic. Her skin is of waxy whiteness and presents ecchymosis on slightest pressure. I was first called to see her six years ago, when she was suffering with extreme, profuse uterine hemorrhage, and what first attracted my attention on entering her room, was the purpuric condition of her skin, the arms and legs being covered with ecchymosis.

From her mother I obtained the following history. The patient was then eighteen years old, and had been subject to nose bleeding from childhood. This frequently followed a fit of anger or some trifling disappointment. She commenced to menstruate at twelve years of age. Menstruation was very profuse, and about a week or ten days before each menstrual period, black spots, from the size of a pea to that of a silver dollar, would appear in her arms and legs, and if she cut, or even pricked her fingers with a needle, there would be considerable bleeding from the wound. Her appetite was variable, and her bowels generally regular, but sometimes the evacuations were black and of the consistency of tar. Her general health was good, except a languid feeling a few days before the appearance of the black spots, and weakness for a short time after loss of blood, and she slept soundly about twelve hours out of the twenty-four. The mother had never suffered any abnormal hemorrhage; nor had any other member of the family suffered so, except an aunt on the father's side, who had profuse menstruation, and had been subject to nose-bleed.

The usual time for the menstrual flow with this girl was six days, but when I first saw her she had been bleeding for five days after the menses should have ceased. I immediately gave her fluid extract of ergot, and also a uterine injection of alum water. I regarded the case as extremely serious, and saw her again in a few hours, in which time she had suffered a slight shock of paralysis.

I requested counsel, but her parents objected, at the same time saying they believed I could do all that any one could. I thanked them for their expression of confidence in me, but told them their daughter was in a very dangerous condition, and they might be better satisfied in the end by having had counsel. I at once set aside the ergot; for, although it had not produced the slightest action on the uterine vessels, I feared its action on the vessels of the brain, as it was evident the paralysis was due to impoverishment of the nerve centres, because, by laying her head lower than her body, so that what little blood she had left could gravitate to the brain, the paralysis was overcome for the time. I then gave her gallic acid, also elixir of iron, quinine and strychnine, and all the milk she could drink. In the meantime Dr. Fox, of Madison, was called, and he pronounced the case almost hopeless, saying I might as well try to hold water in a sieve, as to try to save her. He, however, suggested that I give her a little more iron, which I did, giving her ten drops of the tincture of the chloride in lemonade, but the stomach rejected it. I gave it again two or three times, but with the same result. I then discontinued the iron, feeling that I must guard the stomach; for if the habit of vomiting should become established with her, I should have very little to depend on. I continued the alum-water injections, and was highly gratified at having the hemorrhage cease under their use. I thought I had found the remedy in her case.

The cessation of the uterine hemorrhage was quickly followed by epistaxis. This was controlled by pressure, and for a few days I had hope of her recovery, when from some cause, probably disappointment in not getting what she had her mind set upon, the uterine hemorrhage returned, and persistent vomiting set in. The stomach would not tolerate a particle of anything, not even a drop of water. The retching was almost

[1] Read before the Central Wisconsin Medical Society.

continuous, so that rectal feeding and medication were necessary. I again resorted to my alum-water injection, only to be disappointed in it, although I repeated the operation several times. I then tried plugging the uterine cavity with cotton saturated with tincture of iron, but with no better success. Then I tried subsulphate of iron, and after this, plumbi acetas; but with no better result; for each time the tampons were removed from the vagina, there were also six to eight large coagula to be removed.

The blood in the beginning presented the usual color, and coagulated firmly, but later in the attack it became pale and watery. All this time her sufferings were intense, as all the tissues of the body were starving, and her condition was most distressing. The pupils dilated to their fullest possibility, and paralysis first of one side and then of the other quickly followed. The paralysis was transitory in character, but complete while it lasted. There was numbness of the extremities, panting respiration, and an insufferable sense of suffocation. Her pulse was rapid and weak—at times merely a flutter. Her temperature was sometimes below normal, and her thirst was unquenchable. She wanted something to drink every five minutes; but this only provoked vomiting, and I limited her to half hour time, but this was almost intolerable. I gave her small doses of champagne, which the stomach retained longer than it did anything else; but for three weeks starvation seemed inevitable, and heart failure hourly threatened to close the scene.

Finally, as a last resort, I gave her all the champagne she could drink, hoping thereby to set up a greater state of excitement in the stomach than there was in the uterus, and thus attract the blood from the uterus. In this I acted upon the theory of Dr. I. N. Danforth, of Chicago, "that the blood will rush to the place of greatest excitement;" and in this I was not disappointed, for the hemorrhage ceased, and from this time she began to recover.

She progressed well for three weeks, when epistaxis came again, and she nearly bled to death; but she rallied again, and made a good recovery. I then put her on tonic treatment and on small doses of ergot, continued for a considerable length of time. I recommended careful diet and moderate outdoor exercise, but the nose bleeding came just as often, and so did the black spots, and in less than a year she had another attack, which, in every particular, was as bad as the first. Unfortunately she had lost her desire for champagne; so when stimulants were needed, they had to be given per rectum. This time the subsulphate of iron was the agent which arrested the hemorrhage. After this I stated the case to our highly esteemed Professor of Gynecology, the late Dr. Byford, and he replied that such cases were of rare occurrence and very dangerous, and a cure could not be expected, but said possibly the trouble might be modified somewhat by the continued use of small doses of ergot, and of the mineral acids, especially sulphuric acid. The patient had become disgusted with ergot, so I gave her the acids, but derived very little, if any, benefit therefrom, for in less than six years she has had six of these terrible attacks, each one, if possible, being worse than the preceding. The last attack commenced in May and lasted until the latter part of June of the present year, and was more obstinate than any preceding attack. This, I think, was largely due to excitement, followed by disappointment, but she recovered as usual. The restoration of the lost blood in her case has always been very rapid.

I have tried everything that suggested itself to my mind, as alteratives, tonics and hemostatics; but of all the remedies used locally, Monsel's solution has given better results than any other. Palliative measures are of no use in this case; and it is only by the most persistent employment of both mechanical and chemical means that any good can be derived therefrom. There is no misplacement or morbid condition of the generative organs. The uterus and its appendages, so far as I can determine, are normal, except at the time of profuse hemorrhage; then there is relaxation and lack of tonicity; the cervix is soft and flabby, and the os is sufficiently open to admit the end of the finger. I can attribute this strange condition only to imperfect development of the blood-vessels, the walls of the smaller tubes and capillaries being so thin as to be unable to resist the pressure, and thus readily allow the blood to be continually oozing somewhere. But as these spontaneous hemorrhages show a marked tendency to occur from mucous surfaces, because their vessels are less well supported here than in other parts, it is the more likely to take place from the mucous membrane of the uterus because of the great normal fluctuations in the circulation of that organ.

This is a case which, I think, will tax the patience, the skill and the ingenuity of whoever has charge of it. Gladly would I have given it up years ago, but the patient's parents would not hear of it. However, a few weeks ago, I was somewhat surprised by her father coming in to tell me they had adopted a new plan of treatment with their daughter. I asked if they had concluded to try the hygienic measures I had so long recommended, such as moderate exercise, plenty of fresh air and sunshine, and not allowing her to sleep more than half her time. He replied, "No," but they had taken her to a Roman Catholic priest, who claimed to possess the power to heal, and after fully stating her case to him, he positively assured them he could cure her, and, although he had never seen this young woman before, he told them he had cured twenty just like her. He furthermore said he was the only one in America that had the "specific" for this malady. I remarked that it was very singular that this priest, who is not a physician, should have had so many cures like hers, when not one physician in a hundred in active practice has seen a case just like it.

Dr. Byford, in his excellent work on *Diseases of Women*, in alluding to the hemorrhagic diathesis, mentions one case belonging to this class, that came under his own observation, and the patient died with her second menstrual flow. He said "these cases are of rare occurrence."

I asked the father if he knew what the "specific" was, and he replied, "certain herbs steeped in whiskey, of which a wineglassful is to be taken three times a day." The family are Catholics, and this young women fully believes the priest will cure her; so I shall have an opportunity of seeing, in this case, how far the mind can influence the body.

PERFORATIVE APPENDICITIS.[1]

BY H. REINEKING, M. D.,
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It is not my purpose, in presenting this brief paper, to discuss the subject announced in the title, or even to review to any extent its literature, but simply to add to the recorded clinical data bearing on this subject, two cases that recently came under my observation.

Case 1. Henry C., 12 years old, whose previous health had been good, was first seen by me on October 5, 1890. On the evening of October 2, he took a very hearty supper, consisting mainly of baked beans. During the same night he was seized with severe pain in the abdomen, most intense in the epigastric and umbilical regions. There was great restlessness, nausea and vomiting of mucus but not of food. After a dose of castor oil he had what is said to have been a free movement of the bowels the following night. The pain, however, continued with lessened severity, gradually shifting more towards the right side, until it became pretty well localized in the right iliac region, only now and then extending over the entire abdomen.

On October 5, his temperature was normal; his pulse 88, full and strong; his tongue heavily coated; and his appetite completely lost; his bowels had not moved for forty-eight hours. His urine was of normal appearance and readily passed. Vomiting had occurred very infrequently, not more than once in twenty-four hours. The pain came on in very severe paroxysms, commencing in the right side and extending over the abdomen, while tenderness on pressure was limited to the right iliac region. No induration or dulness, however, could be detected.

Large injections of water, glycerine and oil, as well as the repeated internal administration of Epsom salts, were resorted to with a view of removing any irritating material that might be retained in the intestines, but failed to bring on any fecal evacuation. To relieve pain, hot fomentations and small doses of morphia were used. This treatment was continued for several days, while the patient's condition remained unchanged, except that the vomiting ceased entirely, and the paroxysms of pain became less severe and frequent, though but very little morphia was taken. During this time the temperature and pulse varied but little from the normal.

October 13. During the preceding few days dulness and induration had developed in the right iliac region, together with slight tympanites over the remainder of the abdomen. Now indistinct fluctuation could be felt. The temperature and pulse were slightly elevated; the bowels had not moved since the third. There was no vomiting.

October 14. An operation was performed

[1] Read before the Brainard Medical Society, at Milwaukee, Wis., January, 1891.

for his relief. An incision about two and one-half inches long was made, two inches to the left of the right anterior superior spinous process, and a pus cavity was reached without any difficulty. It was intra-peritoneal and contained a large amount of pus, having a strongly fecal odor; but no fecal matter or other foreign body was found. A strong barrier of adhesions protected the general peritoneal cavity. Thorough exploration with the finger failed to detect the vermiform appendix, and it was therefore thought best not to push the search any further. Thorough drainage and antiseptic after-treatment were carried out.

For two days after the operation the wound was in a good condition, the discharge decreased, the pulse and temperature had been nearly normal; still it was evident that the man's general condition had not improved. His appetite was failing; his bowels were just as inactive as before the operation, failing to respond to injections as well as to cathartics, though the latter were not vomited, nor was the pain apparently increased by their use. The man's pain was not severe; and he had no chills or vomiting.

October 17 his temperature was 101° F.; his pulse 100–105; his general condition worse; his tongue dry, red and deeply grooved. Tympanites was becoming well marked. The bowels had not moved for over thirteen days.

Suspecting the existence of some further collection of pus or some constriction that might account for his failing and for the inactivity of the bowels, a second operation was decided on, with a view of finding and relieving such condition if present. The original opening was enlarged both upwards and downwards and the adhesions between the intestines and surrounding parts were carefully severed with the finger. No additional pus cavity was found. The adhesions were quite extensive, but could all be reached and severed by the finger. The cæcum and ascending colon contained considerable masses of hard fecal matter, while the small intestines were filled with fluid feces and gas. No mechanical obstruction was discoverable. The appendix was closely applied to the colon along its under or posterior surface, with no perceptible mesentery, and imbedded in inflammatory exudate, so as to be distinguishable from the colon proper only by the touch. On raising it out of its bed a point was discovered on its lower surface at which fecal matter was oozing out through two small openings.

While this perforation formed an urgent indication for extirpation of the appendix, the anatomical conditions described were such as to make this procedure an extremely tedious and difficult one. Moreover, the patient showed signs of grave shock, and it was evident that he would die under our hands, should we keep him on the table much longer. The oozing points were therefore carefully stitched over with a few Lembert sutures, and the appendix was left. The wound was partially closed and packed and an antiseptic dressing was applied. In spite of all efforts at restoration the patient died in about two hours.

The *post-mortem* examination revealed little that had not been found during the operation. There was no general peritonitis, no mechanical obstruction of the bowels, no leakage, even under pressure, at the point of perforation. The mucous lining of the appendix showed several ulcers, one at the point where the perforation had taken place. Death was no doubt due to the shock of the second operation, added to the already existing exhaustion.

One question that suggests itself in connection with this case is that concerning the cause of the obstinate constipation. In the absence of any evidence of mechanical constriction, it can only be explained either on the theory of a so-called septic paralysis of the bowels, or by attributing it to the extensive inflammatory adhesions and extension of the inflammation to the muscular coats of the intestines. Considering the small amount of morphia taken, and, on the other hand, the persistent efforts made to bring on a movement, all in the absence of vomiting, the total inactivity of the bowels for over two weeks is somewhat remarkable. Another question, and one closely allied to the first, is, whether it would not have been better to have persisted in searching for the appendix at the time of the first operation; as at that time the patient's condition was such that its removal could have been safely accomplished. As the origin of abscesses in this region is almost invariably located in the appendix, it would seem a good rule not to rest until it has been found and examined, unless there are plain contra-indications to such procedure.

Case 2. Frank B., the patient, was 22 years old and a mason. The following is a short synopsis of the history kindly fur-

nished me by the attending physician, Dr. Schaper.

Pain in the right iliac region was first noticed November 7, 1890, and was soon accompanied by vomiting. The bowels were constipated, but acted after taking a laxative. On November 10 the temperature was 100° F., the pulse 76, the tongue coated and dry, and there was a small, firm mass and dulness at the site of the cæcum. Treatment consisted of rest, hot fomentations, repeated small doses of Epsom salts, with sufficient morphine to relieve pain. The general symptoms increased slightly in severity, while the induration and area of dulness enlarged pretty rapidly until November 17, the tenth day after the onset of the symptoms; when the man had a severe chill early in the morning, followed at once by vomiting and a large evacuation from the bowels. At the same time the temperature rose to 105.2° F., the pulse to 120. Both were, however, considerably reduced again in a few hours.

I saw the case with Dr. Schaper on the afternoon of November 17. The swelling in the right iliac region was considerable, extending to the median line, and indistinct fluctuations could be detected.

An incision three and one-half to four inches long, running parallel to the axis of the cæcum and directly over this organ, was made, and this was followed, on opening the peritoneum, by the evacuation of a large amount of pus, having a strongly fecal odor. At the bottom of the abscess I found an oval lump of dry, hard feces, about one-half inch long by one-third inch thick. The appendix was found floating freely in the contents of the abscess, and provided with mesentery only to a limited extent at and near its base. It felt ragged and very much thickened, and tore easily. It was tied with two ligatures close to its attachment to the cæcum, and was removed. Owing to the protective wall of inflammatory adhesions running transversely across tha lower extremity of the cæcum, this part of the bowel could not be drawn out sufficiently to sew the peritoneum over the stump without using undue traction, hence this otherwise important precaution was dispensed with. After complying with all the usual antiseptic precautions, two large drainage-tubes were inserted and the wound closed.

In the further history of the case the following points may be worth mentioning. The temperature and pulse soon came down to the normal and remained so. Fecal odor of the discharge was noted until November 20—three days after the operation. The bowels moved normally, under repeated administration of Epsom salts. The stitches were removed on the seventh, and the drainage-tubes were left out on the tenth day. On the twenty-second day a small subcutaneous abscess was opened near the point where the drainage-tubes had protruded; and three days later two ligatures and a small, hard, shell-like substance were discharged, after which permanent closure took place.

HISTORY OF BACTERIOLOGY.[1]

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LECTURER ON BACTERIOLOGY, AND ASSISTANT DEMONSTRATOR OF MORBID ANATOMY IN THE UNIVERSITY OF PENNSYLVANIA; ASSISTANT PATHOLOGIST TO THE PHILADELPHIA HOSPITAL.

The knowledge of microscopical organisms naturally advances hand in hand with the science of optics, and although the ancients believed the air and water to swarm with beings of such small size as to be invisible to the naked eye, yet it was mere hypothesis and lacked ocular demonstration. To Leeuwenhoeck, a naturalist of Holland, was reserved the honor of discovering and first describing the bacteria. This he did in his work entitled *Arcana Naturæ Detecta*, printed at Delphis Batavorum in 1680. His observations were made with simple bi-convex lenses fixed in a silver mounting. In order to give a comparative estimate of their size, he placed a grain of dust one-quarter of a millimeter in diameter under the same lens with the bacteria, and thus approximately measured them. In spite of instruments so crude, he was able to describe several species, and point out the great rôle that they play in putrefaction and decomposition. He pointed out their presence in water, in vegetable infusions, in the intestines of flies, frogs and chickens, in the feces of man, and recognized the fact of their augmentation in diarrhœa, the first application of them to human pathology. He also demonstrated their presence in the tartar of the teeth and in saliva. It was a great event for those times and made quite

[1] Part of a Lecture delivered before the Philadelphia College of Pharmacy, December 9, 1890.

a stir in the scientific world. One does not know which to admire the more—the nicety of the results announced, or the skill of the experimenter.

After Leeuwenhoeck, the study of microscopical beings was neglected for nearly a century. The difficulty met with in their study, by means of simple lenses, was enough to turn less hardy observers than Leeuwenhoeck to one side, and it was not until the discovery of the compound microscope that anything further was done towards investigating them.

It was Otto Frederic Müller who first applied the compound microscope to the study of the lower organisms, and he described and classified them in his two works. The first, *Vermium Terrestrium et Fluviatilium Historia*, published in 1774, and the second, *Animalcula Infusoria Fluviatilia et Marina*, published in 1786. It was he who had the honor to put in order this crowd of microscopical beings, that the great Linnæus himself believed ought to be placed to one side, and for which he created his genus "chaos," a veritable "caput Mortuum," where all sorts of beings and things are jostled together.

Müller divided the bacteria into two genera: "Monads" and "Vibrios," which names are handed down to us to-day.

The species of the *genus Monas*, incompletely described and badly figured, are scarcely recognizable; two of the ten species that he includes here are certainly short, rod-shaped bacteria—bacilli. He described thirty-one species under the *genus Vibrio*, of which, however, only six are true bacteria. The other forms are really Algæ, Desmids, and Diatoms. His *Vibrio lunula* is a Closterium, his *Vibrio acus* is an Englena, one of the flagellate infusoria. Among the ciliated infusoria to be found in his genus Vibrio are the Paramoecii, the little slipper animalcules, and of the Nematodes, the Anguillulæ.

Lamarck, in 1815–1819; Bruguière, in 1824; and Bary de Saint Vincent, in 1824, have confined themselves in their works to reproducing, intact or but little modified, the gifts of the Danish naturalist, so that up to the year 1833 little progress was made beyond what Müller had done in the eighteenth century.

Ehrenberg is the next to attract attention. Using perfected instruments, he made great progress in the study of microscopical beings. It was at about the time that the botanist Schleiden was carrying on his studies in plant histology, studies the result of which was to agitate the scientific world, and form the basis of what is now known as cellular structure; I refer to his discovery of the cell in 1838. These results, as well as those of Ehrenberg, were due to the rapid advance of optics and the improvement of methods of observation.

In Ehrenberg's grand work, entitled *Die Infusionsthierchen als Vollkommene Organismen*, we find results that are greatly superior to those of his predecessors. He separates those beings which we are considering, from those that had been associated with them, although differing so greatly, and reunites them in his family of the *Vibrionia*, which he describes in the following manner: "Filiform animals without intestines, naked, without external organs, united in chains or filiform series, by the effect of an incomplete spontaneous division." This family comprehends the four following genera:

Bacterium—Little rods, rigid, without vacillating movements.

Vibrio—Filiform bodies, susceptible to undulatory movements like a serpent.

Spirillum—Filiform bodies in an inflexible helix.

Spirochætæ—Bodies in a helix, forming a long flexible string.

Dujardin takes the ideas of Ehrenberg and modifies them a little, in his work entitled *Histoire Naturelle des Zoophytes, Infusoires*, published at Paris in 1841. Here we find new and interesting details concerning the development of bacteria in diverse infusions, and a description of the methods for obtaining and studying the different forms. The four genera of Ehrenberg he condenses into three, fusing the two forms spirochæta and spirillum into one, a movement that has since been approved by many observers, the distinctive characteristics of the two genera having only a relative value of order far too slight as a basis for separation.

The results obtained at this epoch were weighty and for the most part to be preserved; certain ones have been many times confirmed, and are still to be found in the best works.

The achromatic microscope was being perfected day by day, and in the hands of such able experimenters as Dujardin announced conclusions that could be considered as strongly supported, if everything was not made certain.

Up to this time the appearance of these beings so simple, these *animalcules* as they were called, in the infusions, was regarded as a simple fortuitous phenomenon. At the same time very appreciable alterations in the media in question were observed, but they were far from supposing that there was a relation between these two, a relation of cause and effect. If indeed they sought to connect one or the other of them with the phenomenon, it was that they might cause the second to depend upon the first, thus making a law of the ancient adage: "*Corruptio unius, generatio alterius.*" And, as Leeuwenhœck had regarded the considerable augmentation of microscopical beings in the stools of diarrhœa, so many of the *savants*, Linnæus among others, were borne by the simple views of their intellect, to consider these vibrios as the elements of contagion in many pathological states, although nothing positive had been advanced, and not a single fact was forthcoming to support the entirely gratuitous suppositions. The minds of scientists were so little turned from this direction, that Devaine and Rayer, in 1850, pointed out, quite simply and merely as a curious fact, and without attaching any great importance to it, the presence of rod-shaped bacteria in the blood of animals dead from the curious disease called "*sang de rate.*"

The auspicious moment at last arrived, and Pasteur appeared on the scene. He established with certainity the close connection, or the relations of cause, which unite the alterations in certain liquids, certain fermentations, to the development and to the life in the interior of the most simple living beings, the bacteria. In his work on lactic fermentation he has laid the first certain foundation of bacteriology, by the physiological study of these beings. What he demonstrated for this fermentation, he extended to others, and arrived in forming that train of studies which constitutes one of the most glorious scientific achievements of France.

Guided by the principles that as master Pasteur promulgated, Devaine went over the observations that he had made several years previously with Rayer upon the blood of the spleen, and was able to establish by a series of experiments, and a line of able deductions, that the cause of the malady was certainly bacteridian, as bacteria were found in great abundance in the blood of sheep ill or dead from that disease.

Pasteur has shown the way to follow in elucidating in all its details a terrible disease, the ruin of the raisers of the silk worm, "*la flacherie*," as it is called in French, which is manifestly bacteridian in origin. It was the first complete study of a contagious affection, and since then from these remarkable teachings luminous conclusions have been drawn relative to the study of maladies recognized to be of the same origin, when the same question of contagion, of recidivity, of heredity, of media, which play so great a rôle in the etiology, and the pathogenesis of infectious diseases arise.

Koch, following in the footsteps of Pasteur, has made remarkable advances in the science of bacteriology, introducing certain refinements into the technique which have facilitated the study, and laid a basis for a more exact classification.

We must not forget to mention the names of Brefeld, Van Tieghem, Prazmowski and Buchner in connection with Koch, as they have played a prominent rôle in work in which he was the pioneer, and they have all been followed by able investigators in many countries. The great feature of Koch's work was the pointing out of the advantage of a solid medium, but gelatine had already been employed by Vittadini in 1852, and potatoes and turnips had been used in Germany.

Coze and Feltz, in 1872, showed that the profound changes in the blood, in the infectious diseases of human beings, were also due to the bacteria, and they made an exhaustive study of one of the most terrible of those affections, viz.: *septicemia*.

The most beautiful applications of these fecund ideas are found without contradiction in the researches upon anthrax, where men like Koch and Pasteur have exerted themselves to the utmost, and have been able to make the study of this malady the basis of the germ theory of contagious diseases.

Since then this science has advanced with a rapid stride, thanks to the labors of assiduous investigators throughout the world, among whom to be noted as the foremost, besides those already mentioned, are Chauveau, Cornil, Chamberland and Roux, in France; Klebs, Flügge, Gaffky, Löffler, Eisenberg in Germany; Lister, Crookshank and Klein in England; Sternberg, Formad, Shakespeare and a few others in America.

The morphology and the physiology of the bacteria, after having been in great honor, has unfortunately been relegated to a second place, and almost eclipsed by the

interest and splendor of the grand pathological gifts; and in spite of the labors of such botanists as de Bary, Nægeli, Cohn, Zopf, and physiologists like Duclaux and Pfeifer, the progress of bacteriology as a science has been slow.

Much work has been done that is useless, and many erroneous conclusions have been drawn, yet on a whole there has been laid a solid foundation, and ways have been opened along which the careful observer can reap a rich harvest.

Reports of Clinics.

BUFFALO GENERAL HOSPITAL.

GYNECOLOGICAL CLINIC—DR. MANN.

Polypus Uteri.

Dr. Mann presented a woman whose symptoms were so indefinite that no further diagnosis could be made than of some pelvic trouble. Examination showed a polyp projecting from the external os and apparently attached by its pedicle at the internal os. This might be malignant, or an adenoma or a mucous polyp. If it were malignant, Dr. Mann said he would resort to high amputation of the cervix. Referring to the relative merits of high amputation of the cervix and total extirpation of the uterus, he said that he regarded total extirpation as a perfectly justifiable operation. He had done it four times with one death, immediately following operation, due to the growth of the cancer in the broad ligaments. It was so soft that its presence in the broad ligaments could not be diagnosticated at the time of the operation. The three other patients, however, died within a year, from recurrence of the cancer. He had known one patient to live ten years after high amputation, a longer duration of life than had occurred after hysterectomy in his experience. Considering the difficulties and dangers of total extirpation of the uterus, and believing that the duration of life was at least as great after the less radical operation, he preferred high amputation of the cervix—the general opinion of the profession.

After a more careful examination, it was decided that the growth was not malignant, and it was removed with the chain ecraseur, although Dr. Mann does not consider it a scientific instrument, not even believing that it has the advantage of diminishing hemorrhage. The tumor was somewhat modulated, irregularly spherical and about one and a half inches in diameter. After swabbing out the vagina, it was tamponed with pledgets of non-absorbent cotton dipped in hydro-naphthol solution and sprinkled with iodoform.

Dr. Mann advised the removal of such pediculated tumors as soon as their presence was noted. They were almost certain not to be malignant, and they could be easily twisted off with polypus forceps, or snipped off with scissors, and the vagina tamponed. Any one could do this operation. Dr. Mann spoke of his chagrin after being summoned one hundred miles into the country, to operate, to find that the tumor was of this nature.

Although insignificant at the outset, these tumors may later cause much harm. Dr. Andrews, of the Buffalo State Insane Asylum, once called Dr. Mann to operate upon a maniac with the following history. The patient had a little mucous polyp, which the late Dr. Miner wished to remove ten years ago, but operation was refused. The tumor, as is frequently the case, caused profuse menorrhagia, on account of the congestion of the tumor from compression of its pedicle at the menstrual period. These hemorrhages resulted in anemia and neuralgia, the latter affecting the pelvic organs especially. Narcotics and alcoholics were used to control the neuralgia, and the woman acquired both the morphine and the whiskey habit. Her mind had become utterly destroyed. Dr. Mann removed the tumor, the patient made a good recovery from the operation, and within a year she was restored to her family and to society perfectly cured, and she has remained well since.

Dr. Mann advised that after removing a tumor of this sort, the patient be directed to return in a week, so that if other tumors were present they might be removed.

Extra-uterine Pregnancy.

Dr. Mann showed a specimen removed from the pelvis of a woman by abdominal section.

The history was apparently that of an abortion at the third month, but no fetus had been seen. There was a mass to be felt in the pelvis, and from its presence and the history of the expulsion of the decidua with-

out a fetus, the probable diagnosis of extra-uterine pregnancy with rupture was made.

A cyst was found containing several large blood-clots. It proved to be the Fallopian tube, which had burst between the layers of the broad ligament, and the contents of the cyst had dissected their way into the substance of the broad ligament. The cover of the sac was a large piece of omentum, which was removed. The sac held nearly a pint of blood clots. The membranes could be made out indistinctly, but the fetus had disappeared, probably by absorption. After removing the sac, drainage was provided for though the abdominal wound.

PERISCOPE.

Excision of Lupus with Immediate Skin Transplantation.

Dr. Geo. Ryerson Fowler, surgeon to the Methodist Episcopal and to St. Mary's Hospital, Brooklyn, reports in the *British Medical Journal*, February, 1891, a very good result from excision and immediate skin transplantation for lupus. He says: Mrs. O'B., aged 65, was kindly referred to me by Dr. Sidney Allen Fox, of this city, with a well-marked lupus exedens of the nose. The entire integument of the nose, with the exception of a small point at its tip, was involved in the disease, the ulceration extending upon the cheeks, and to the inner canthus of the left eye as well. Beyond the area of ulceration there were several suspicious tubercles. The patient states that the disease began many years ago with what seemed like a small pimple upon the left side of the nose, which, after several years, began to ulcerate. This ulceration progressed slowly, new tubercles making their appearance in the immediate area of the surrounding integument, which in their turn would undergo the ulcerative process. The superficial surface involved at the time of coming under my observation measured 5 ctm. in a vertical direction by 7.5 ctm. transversely.

On April 14, 1890, at St. Mary's Hospital, the following operation was performed under ether: The entire diseased surface was circumscribed by an incision extending through the thickness of the skin to the subcutaneous cellular tissue. This was made to include all suspicious tuberculous tissue. By the use of the scalpel and curette the structures thus marked out were thoroughly removed, stopping short only of periosteum and bony structures. By means of hot salt water compresses and firm pressure the hemorrhage was arrested, but one ligature being required. The patient's left arm in the deltoid region was then disinfected, and Thiersch's method of skin grafting followed, the strips of skin being immediately transferred to the surface upon the nose and face from which the lupus tissue had been removed. The strips were laid side by side, their edges slightly overlapping each other, until the entire surface was well covered in; nine strips were required. The parts were then dressed by being first basket-strapped with narrow strips of oil silk until all the grafts were thus protected. Over this were then laid several thicknesses of gauze wrung out of a sterilized salt solution, the whole being held in place by a moderately firm gauze bandage.

On the third day the dressings were removed and replaced, the oil silk permitting of the lifting away of the gauze compresses without disturbing the transplanted strips. Every strip seemed to have secured a hold, and this was confirmed at subsequent dressings, which were repeated at intervals of two days. The oil silk strapping was found to act most efficiently as a means of maintaining a certain amount of moisture of the transplanted strips, which latter particularly I have found to be quite essential to success in this method of skin transplantation.

As the case progressed, the edges of the transplanted strips, which had been permitted to overlap the healthy skin in order to allow for shrinkage, were gradually trimmed, care being taken to still leave sufficient of the strip to prevent the formation of cicatricial tissue at the point where these joined the limits of the circumscribed area. In fourteen days the healing was complete, but the patient has been kept under observation until the present time for the purpose of determining the curative effects of the skin transplantation upon the lupus. There has not been the slightest suggestion of a recurrence of the disease.

The method of treatment here pursued is that which was introduced to the profession by Senger, of Krefeld. In order to prevent the recurrence of the disease in those cases in which the gap cannot be closed by suturing, and where heretofore it has been necessary to permit of slow granulation and cicatrization of the parts following excision, Senger recommends that skin transplanta-

tion by the method of Thiersch be at once practiced. He describes a case in which he employed this method with success, the disease having made considerable progress upon the cheek and upper lip.

Iodoform-Ether-Glycerin Injections in Septic Cavities.

Dr. John R. Haynes discusses, in the *Southern California Practitioner*, the use of iodoform dissolved in ether and glycerin as an antiseptic in gynecological and surgical practice. There is, of course, nothing new in this application of iodoform, but Dr. Haynes cites cases illustrating a valuable method of treatment. The following was the formula used:

R Iodoform . . . . . ℥ss
Ether . . . . . f℥i
Glycerin . . . . . f℥iii

A woman was allowed to retain the decidua of a two-months' miscarriage for ten days, notwithstanding septic symptoms had developed. On the tenth day Dr. Francis Haynes saw the case in consultation. The uterus was held fast by a swollen adherent tube, rendering the subsequent process somewhat difficult. Under chloroform it was dilated with Goodell's dilator, and a large quantity of decidua removed by the curette. Copious irrigation. The temperature fell from 104° to normal, but in two days rose again to 102.6°. After copious irrigation, a portion of iodoform mixture was injected.

The method of cleaning and disinfecting the uterus was as follows: The patient was brought to the edge of the bed, the legs wrapped in blankets, the bed protected by oil-cloth, forming a water shed into a tub. The vulvar hair was clipped, and the vulva was carefully cleaned. The vagina was irrigated with half a gallon of hot water, then with a quart of 1 : 2,000 sublimate solution, then with hot water. A double tube, which had just been boiled, was attached to a fountain syringe and introduced into the uterus under guidance of the finger, taking care not to introduce air. Two quarts of hot water were used; then a pint of 1 : 5,000 sublimate solution, then a quart of hot water. The fountain syringe was now detached and a short piece of rubber tubing attached to the end of the double tube, through which, by means of a large glass syringe, an ounce of solution of peroxide of hydrogen was very slowly injected. Next one ounce of the iodoform mixture was very slowly injected. Of course most of it ran out through the double tube, which was now removed. A pad of thick sublimate gauze was now adjusted to the vulva. Recovery was rapid.

A man had an abscess near the right lobe of the prostate. It was feared that it would break into the bladder or rectum, or both. With a long narrow bistoury, the abscess was reached from the perineum. A drainage-tube was inserted, passing up four and one-half inches, and essentially the same process as that just described was gone through. This was repeated morning and night for three days, when the drainage-tube was removed. Very slight discharge followed, and the man made a rapid recovery.

A woman had peritoneal abscess reaching from the left iliac fossa to within two finger-breadths of the left costal margin, nearly to the lumbar region on the left side, and to beyond the linea semi-lunaris on the right side. It was opened by an incision admitting two fingers; the peritoneum was sewed to the skin, irrigated and drained. Next day the process described was repeated. The temperature, which had ranged from 100° to 104°, went to 99°. On the third day it rose to 99½°, and the treatment was repeated. The treatment in the interval consisted merely in renewing the sublimate gauze, dressing occasionally when it became stained by a thin, yellowish discharge. The patient was kept in bed a month, and at the end of two months she was perfectly well, except that a slight thin discharge continued from the seat of the abscess.

The aim was to repeat the process only when a rise of temperature or the presence of pain indicated that pus was accumulating in the cavity. During the entire treatment the process was repeated three times.

Early Treatment of Otitis.

In the *Medical Record*, February 7, 1891, Dr. Sexton writes: The medical man who sees a case of otitis media which has suddenly developed during the progress of catarrhal inflammation of the air tract of the head, whether consequent on scarlet fever, cold in the head, or other affection, assumes a serious responsibility unless well informed in its management, since under certain conditions a seemingly mild case may speedily

become most painful and grave. I have recently been reminded of the perplexity, not to say apprehension, felt by the conscientious practitioner when untoward symptoms develop, several distressing cases coming under my observation in consultation with other physicians. The urgency of the cases seen was no doubt due to the severe winter weather of late prevailing. I hope I may be permitted to offer some practical suggestions drawn from such experience, since they may be of interest to others when in doubt as to the best course to pursue.

It would be out of place here to go far into the pathogenesis of otitis, but we may assume that acute middle-ear affections are, generally speaking, divisible into two principal groups; namely, mild and severe. The mild ones are usually preceded by more or less earache, which almost wholly disappears on the occurrence of a discharge from the ear. The pain is due to inflammation of the mucous-periosteal lining of the drum (inflammation limited, indeed, for the most part to the atrium of the drum) and the confinement of secretions, which may be either moderate or profuse in quantity. Beyond cleansing the organ by means of cotton-wool pellets and very gentle syringing while discharge lasts, these cases had best be let alone for the most part, inasmuch as they have a tendency to spontaneous recovery. Though those cases often get well despite misguided treatment one should never be lulled into unguarded security, whereby valuable time may be frittered away in useless treatment when severer symptoms may be impending. In a severe case it would seem almost impossible to be mistaken in diagnosis if the ear were properly examined even before the more urgent symptoms fully develop. The pains and headache are soon unremitting, unendurable, more agonizing, perhaps, than the pains of almost any other disease, and they demand instant relief, if attainable.

Much blame, we fear, for children's dreadful sufferings specially, not to mention the imminent danger to life, frequently lies at the door of writers who fail to differentiate between mild and severe cases, and who too often recommend for both of them such treatment as may, for the most part, be found among the rubbish of ancient writings called medical; methods meddlesome and often brutal when zealously employed; liable, indeed, to be followed by sad results, now and in the future. Waste no time, therefore, in temporizing measures, since the relief to be had should be quickly sought. So soon as the pains are great, no relief following the discharge, if any occurs, and the upper edge of the drum-head becomes red and bulging, it may be suspected that the gravity of the symptoms is mostly due to the confinement of secretions in the bony chamber comprising the loft above the main cavity of the drum—the attic of the drum in fact—a space lying almost entirely above that part of the drum which is seen on looking into the ear to be covered by the drum-head. The swelling of the lining membrane of this unyielding bony cavity closes the natural outlet for secretions, which can now only escape from the attic by dissecting their way slowly underneath the membrana flaccida and finally appearing as a tumefaction there or further along the bony portion of the external auditory canal. Finally, the mastoid process or general outer surface of the temporal bone may be invaded with formation of abscess of varying proportions.

The onset of this unfavorable process must be recognized at once if we would prevent extensive trouble; puncturing the drum-head low down, blistering, leeching, poulticing, etc., will do no good; indeed, quite the contrary, since they may distress the patient and increase the local irritation. As the invasion of the trouble is rapid, so the remedy should be sure and swift; no stabbing the drum-head in the dark or fruitless incisions into the canal. Let a careful examination of the parts (patient narcotized if unable to remain quiet—which in children cannot be expected) with the electric lantern worn upon the forehead be made. Fortunately we may now, if timely, relieve the symptoms at the start, by thus liberating the fluids in the attic and establishing drainage, an operation based upon the principle inaugurated in the treatment of these parts by Wilde, who waited, however, until much damage had been done before seeking to give relief by letting out matter presenting at the mastoid process.

Do not, therefore, wait for days while more and more damage is being done, when the extension of inflammation from the seat of the disease may be prevented by a fine incision through the membrana flaccida, a proceeding speedily followed by relief in most cases, and in many by a speedy cure. To make the incision a small, sharp-pointed bistoury, the shank of which is set at a con-

venient angle to its handle, should be employed. The point of the instrument is then to be advanced through the membrana flaccida well up into the attic, and as it is withdrawn a free incision made through any bulging or swollen tissues of the canal in proximity to the membrane.

Any one who has witnessed the immediate relief following the liberation of confined secretions, specially from underneath deep fascia or the periosteum can appreciate the importance of this operation. Of the subsequent treatment but little need be said; it will depend largely upon the injury already inflicted upon the ear; if done early, usually no further special treatment will be required.

Uratosis.

The *Montreal Medical Journal*, January, 1891, says: The term uratosis has been suggested by Sir Wm. Roberts to designate that disordered state of nutrition characterized by the deposition of the crystalline urates in the tissues or fluids of the body. By adopting this nomenclature, several advantages, it is claimed, would follow. First, a distinction would be clearly drawn between the effects of an excess of uric acid in the blood and uric acid precipitated as crystalline urate. What, if any, pathological significance the former condition has was at present unknown. The serious consequence following the latter state were well recognized. Excess of uric acid in the blood was only an exaggeration of a normal state, while deposition of crystalline urates was, in any quantity, a pathological condition. Another advantage claimed is that we would be better able to estimate the relation between the different causes that give rise to uratic deposits. When speaking of "ordinary" gout and "saturnine" gout, we use terms which, in the opinion of Sir Wm. Roberts, would be more truly expressed by "gouty uratosis" and "saturnine uratosis." It being much more likely that the gouty diathesis and lead poisoning, while differing in other respects, had one tendency or vice in common, viz., the tendency to the deposition of the crystalline urates or uratosis.

The separation of the effects of the deposition of the crystalline urates from simple increase of uric acid in the blood was of importance from a therapeutic point of view. In the former, the danger of precipitation, especially in the kidneys, was of a very grave character and called for immediate treatment. By the employment of alkaline remedies, we are enabled to postpone for a long period this deposition, and thereby gain time which should be employed in combating the essential cause.

Etiology of Extra-Uterine Pregnancy.

In the *North American Practitioner*, February 1, 1891, Dr. Bayard Holmes says: The subject of etiology in these sad accidents of reproduction are significant in relation to progress and treatment. The mother is exposed in extra-uterine pregnancy to an immediate and to a remote danger. The immediate danger is fatal anemia when rupture of a tube takes place, and the remote danger is sepsis in a limited hematoma or in a retained dead fetus. In a study of the bacterial condition of dead extra-uterine fetuses which I presented to this Society, my attention was called to the great danger of sepsis. Hematomata in other parts of the body are ordinarily removed by absorption without any febrile disturbance, except that early and transient rise which has been attributed to "ferment intoxication." The case is very different in those pelvic hematomata which are due to extra-uterine fetation. Both the retained dead fetuses and the hematomata in this region become infected, in the great proportion of cases, within six months, and a large percentage of the remainder by the end of the year. This fact, I believe, is to be explained by the cause of extra-uterine fetation, which there is good reason to believe lies in an antecedent infective inflammation in the tubes or the endometrium.

In order that an extra-uterine pregnancy may take place, there must be some *malformation* or *deformity* in the sexual apparatus. It does not take place in the normal condition of the tubes and uterus. That it may be a malformation we can readily see, because the present condition of the human uterus is evolved from a very large and divided uterus which is exhibited in the fetus and the lower animals. We may expect an occasional reversion to the original type and hence a risk of extra-uterine fetation. Such an arrest of development cannot often occur, because anatomists do not find these deformities frequently. Nevertheless pregnancy in a rudimentary form is not unknown. A step further and we have a tubal pregnancy.

Dr. Christian Fenger presented at a recent meeting of the Gynecological Society a tube, in the distal third of which there was a two-months' fetus. Its passage into the uterus seemed to have been impeded by an ovum which had previously attached itself to the wall of the tube and grown so far as to occlude its lumen.

Most cases of extra-uterine pregnancy are preceded by a long term of sterility following an unhealthy puerperium, which in itself points to some deformity in the sexual apparatus, arising from one cause or another. It is probable that most of these cases of deformity are due to a process of inflammation, and that inflammation is due to sepsis, and sepsis is due to infection; that accounts for the presence, in close proximity to this extra-uterine fetus, of septic material which converts the hematoma into an abscess. Of course we must always consider the possibility of pressure atrophy between the heavy, dead fetus and the contents of the bowel (hard feces) opening a communication between the bowel and the fetus and producing infection in that way. That must be considered in these cases, but it cannot well be considered in cases of large accumulations of blood. We cannot consider the possibility of suppuration or any septic decomposition of a large mass of blood without infection; that is impossible. Infection is rare through the circulation, but it is not wholly unknown. Therefore I look upon the indications for operation to be these two: The dangers from hemorrhage and the dangers from sepsis. But the danger from sepsis is imminent on account of the probable etiology of extra-uterine fetation.

The Digestive Troubles of Infants.

The Paris correspondent of the *Archives of Pediatrics*, January, 1891, gives an account of Le Gendre's treatment of the digestive troubles of infants. The causes of these troubles are to be sought in the fact that the babies are bottle-fed. It would appear that French mothers will neither nurse their infants nor employ a wet nurse. When the troubles occur, instead of diminishing the supply of food, which ferments and occasions the disturbance, the infant is given more milk because it cries and is thirsty. Water or a carbonated water would be better. Sometimes the system becomes intoxicated by the products of fermentation, and death ensues.

In the early stages it is proper to suspend alimentation. In the later stages, when there is much fermenting matter in the bowels, empty them with calomel, and then give the antiseptics—resorcin, benzoate of soda, salicylate of soda, salicylate of bismuth, naphthol, etc. If one is called still later, when there is fever, flat belly, no urination, or very little, convulsions and coma, then no purgation or antiseptics are of use; we must then use stimulants to the nervous system, hypodermic injections of ether, camphor or caffeine, mustard baths, or wine baths, while friction is used to the skin. By the mouth, every quarter of an hour, give a teaspoonful of sherry, port or champagne which has been mixed with one-half water. Rectal injections of meat extracts or wine may be tried also, and, indeed, they should be relied upon for some hours afterwards before returning to milk alimentation by the mouth. Even when the milk is used it would be well, in serious cases, to give also, every half hour, before nursing, a rectal injection of one to one and one-half ounces of meat (soup) containing two and one-half drachms of dextrin. If the digestion continues to be difficult, the following potion may be used:

℞ Pepsin . . . . . gr. xv
Acid. hydrochl. . . . . ♏viiss
Sacch. . . . . ʒiiss
Aquæ destill. . . . . fʒiv
M. Sig. Teaspoonful after nursing.

Regulation of Prostitution in Missouri.

The *Weekly Medical Review*, February 21, 1891, says that a bill has been introduced and is now pending before the Missouri Legislature, which provides that the boards of police commissioners in all cities of the State having the same, are required to make a complete list of all houses of ill-fame, and of all fallen women, revising this list as occasion may demand, and furnishing it to the boards of health, giving the names, aliases, ages, and former occupation of the women, together with such particulars as may be of statistical and sanitary interest, the record to be kept in the office of the Clerk of the Board of Health, and to be open to inspection to the members of the boards and the Municipal Assembly only.

Each keeper of a house of ill-fame shall be required to furnish complete information to the board and its agents of the particulars set forth in section 1, to give notice of any change that may take place in ownership or with respect to the inmates. Any person failing to comply with such requirements shall be guilty of a misdemeanor.

The police boards are to set apart a district consisting of not more than one-twentieth nor less than one-fortieth of the total area of the city, and as far as possible outside the residence section, wherein fallen women may live. This district shall be divided into sub-districts, and for each subdistrict shall be appointed a regular physician whose duty it shall be to visit at least once a week each of the houses and women appearing on the list furnished by the board for his sole use and inspection. Such physician shall inquire into the condition of the women, and make such orders as are necessary. He may cause their removal to the hospital or hold them under bond of from $200 to $500. He shall make a weekly report to the Board of Health concerning each house and the condition of the inmates, and the keeper of each house shall pay to him $1 per week for each such inmate, this money to be delivered to the Clerk of the Board of Health, subject to the order of the board. Any person violating the order of such physician, or in any way obstructing him in his duty, shall be deemed guilty of a misdemeanor and fined not less than $20 —provided that any person may within three days of the issue of the order appeal from it in writing to the Board of Health, which shall thereupon grant a final hearing.

The Board of Police Commissioners, upon the request of the Board of Health, shall have the power to suppress any house of ill-fame within any locality they may from time to time designate, or the keeper of which disobeys any lawful order. A fine of not less than $20, nor more than $500, may be inflicted upon any person violating such conditions by persisting in a course contrary to the law.

The boards shall, if necessary for the purpose of carrying out the provisions of the foregoing section, establish a refuge or reformatory wherein fallen women who desire to lead a virtuous life, but are unable to obtain remunerative employment or are physically unfit to perform work, may be sheltered until placed in some position where they can maintain themselves honorably.

Meat Juice and Glycerin Applied Externally.

Dr. E. H. Lewis, of Culpeper, Va., writes to the *Virginia Medical Monthly*, February, 1891, that he had as a patient, a two months' old baby, born in the seventh month of gestation. It was very small—weighing after birth, only about 3½ pounds—clothing and all. In this puny condition, the child took cold and appeared to be threatened with broncho-pneumonia. As a result of its inability to cough up the secretions, spasms set in, and life was almost extinct when I responded to the hasty call. Indeed, for some minutes after my arrival, no signs of life could be detected. Yet by vigorous continuous rubbing the body with equal parts of whiskey and water, life was sustained until evidences of it became apparent.

At this stage Dr. Lewis prescribed a mixture of cod-liver oil and whiskey for friction purposes, hoping thereby to furnish some element of nourishment with the stimulant. But by mistake or misunderstanding in the hurry, a bottle of meat juice and glycerin was substituted, and the contents were rubbed all over the infant's body. In a few hours the child recovered enough to swallow, when the meat juice and glycerin were given in doses of one, two and three drops at a time as the stomach would take it. By this double administration of meat juice and glycerin—rubbing the body with it and dosing it internally—in his opinion the child's life was saved. In thirty-six hours it was taking milk as usual from the bottle, and continued to improve until now it is doing well.

Dr. Lewis says: undoubtedly in this case the skin absorbed enough of the meat juice and glycerin to furnish the requisite nourishment for the time being. And the case demonstrates the fact that the remedy can be administered successfully by the skin.

Numerical Relation of Sexes.

The *Journal of Cutaneous and Venereal Diseases*, February, 1891, cites a paper by Dr. C. Dusing, as stating that the relation of the number of males to the number of females born is a constant one as regards man, animals and plants. In man the numerical relation of male to female is 106 to 100. In horses, male and female, it is 100 to 98.

This relationship in man is subject to va-

riation to a certain extent. For example, during war male births predominate. The absence of a considerable number of men exerts this certain influence. In favorable times not alone are a greater number of children born, but girls preponderate. In unfavorable times fewer female children are born and more boys.

Among the first births in the human species there are relatively many males. This excess is especially seen in the children of those mothers who are advanced in age when they become pregnant, and is attributable to the nutrition of the mother not being up to normal.

From the explanations, it is concluded that the sex is not inherited, but results from a combined action of causes. These factors act not only at the time of impregnation, but at various times after. From the beginning the ovule has a tendency to the development of a certain sex. and the semen possesses the same tendency; both combine at the time of impregnation to constitute one tendency, which determines the sex. Long after impregnation, when the embryo is already developed, the nutrition is still of influence, and can cause a change of tendency even if the sexual organs have begun to develop: as for example the occurrence in the mother of a poor state of nutrition may arrest the development of the female and bring about the development of male organs.

When this late reactionary influence remains absent or is not exerted strongly enough to cause a change in the development of the sexual organs, then the sex is definitely decided.

Boric Acid in Otorrhœa.

In the *Rüsskaia Meditzina*, No. 30, 1890, p. 470, Dr. M. G. Tzitrin, of Simbïrsk, highly eulogizes the treatment of both acute and chronic otorrhœa by insufflating finely-powdered, pure boric acid. In such cases, where the discharge is profuse, the procedure should be repeated twice or thrice daily; be the secretion but moderate, one application a day is fully sufficient for all purposes. On each occasion, the ear should be previously thoroughly washed out with a tepid 2 or 3 per cent. solution of carbolic or boric acid, and then carefully dried with a plug of sublimate or salicylic cotton-wool, after which as much boric acid should be blown into as is necessary for covering the tympanic walls and the remnants of the drum-head with an equal layer of the substance. No powder should be left in the auditory meatus itself, since the latter tolerates any pulverized substances rather badly. Under the treatment indicated, the purulent flow is said to cease in from 8 to 12 days.

Druggists and Venereal Patients.

The *National Druggist* is published in St. Louis, and it presents in its advertising column, February 1, 1891, the following proposition to its readers.

"To retail druggists. Many of you have heard more or less of the wonderful curative properties of the Cook Remedy Company's Magic Remedy for the Cure of Syphilis.

"If you will mail us names and address of those people whom you know to be affected with syphilis, we will undertake to secure them for treatment. We guarantee to cure, or refund all money. We will reimburse you for postage, and for every patient we get out of those whose names you give us we will pay you $25 cash. Look us up, if you will, and see that we are responsible, and that we will do as we agree. All information will be kept strictly confidential. Some druggists have already been paid by us $125 in a single month.

"Start in at once; it will pay you."

Test for Albumin in Urine.

A test for albumin in urine, proposed by Dr. Adolf Jones, of Vienna, is given in the *Pharmaceutial Record*, December, 1890. It is as follows: Upon a portion of the sample of urine is placed an equal bulk of strong hydrochloric acid without shaking, then from a glass pipette let two or three drops of solution of chlorinated lime fall into the tube. If albumin is present a white ring will be visible at the juncture of the acid and the urine even if present in 1 part to 10,000, which makes this one of the most delicate and easily applied tests.

Menthol for Vomiting in Pregnancy.

It is said that the following prescription is of great value in relieving the vomiting of pregnancy.

℞ Menthol . . . . . 15 grs.
Alcohol . . . . . 5 fl drachms
Distilled water . . . . . q. s. ad f℥v

M. Sig. Dose: A tablespoonful every hour.

THE

MEDICAL AND SURGICAL REPORTER.

ISSUED EVERY SATURDAY.

CHARLES W. DULLES, M. D.,

EDITOR AND PUBLISHER.

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Make as few paragraphs as possible. Punctuate carefully. Do not abbreviate or omit words like "the" and "a," or "an."

Make communications as short as possible.

NEVER ROLL A MANUSCRIPT! Try to get an envelope or wrapper which will fit it.

When it is desired to call our attention to something in a newspaper, mark the passage boldly with a colored pencil, and write on the wrapper "Marked copy." Unless this is done, newspapers are not looked at.

The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

PHYSICIANS' ACCOUNTS.

The *North American Practitioner*, March, 1891, says that there recently occurred in the La Salle County Court of Probate, a case of important interest to all physicians. Dr. S. rendered services, medical and surgical, to a Mr. M. during a period of five years, when Mr. M. died and his will was probated. The doctor's bill (something over $500) was presented, with affidavit, and objected to on the part of the administrators. Upon the hearing, it was shown that the doctor did not keep a ledger, but relied only on his pocket record in which he had made his charges, by signs, such as each individual physician has the habit of using. The doctor swore to each item of entry and attempted to explain what each character used meant. The defense here objected and was sustained by the Court. Then the doctor attempted to prove his books by the old common-law rule, that is: by several witnesses who had settled accounts with him by these books; but they could not tell what charges were indicated by the signs and letters used. Then, by two brother physicians, the doctor tried to show that all physicians used the same kind of books; but they could not tell, from an examination of the books, what the services rendered were.

The judge, in deciding the case, totally excluded the books, and the doctor was defeated. The Court and defendants admitted the equity, that is, that services had been rendered, but the Court was compelled by *the law* to ignore everything because the doctor could not show that somebody else was thoroughly acquainted with his system of book-keeping.

If it be asked: Why did not the doctor keep a ledger and transfer his charges to it? Here again the law steps in and says that only books or memoranda of *original entry* can be used as evidence to prove a claim. So the ledger would not help out.

In discussing the case, the judge suggested two remedies. One that every physician should have a complete index of characters used in the book, and second, that the doctor should tell some disinterested persons, at least two, what his signs meant, so that they could testify to the same when called upon. Even this is of doubtful practicability, and, we think, of more dubious reliability in litigation. The best way to avoid such snarls is to avoid suits for professional services. Where a suit is unavoidable, we believe that it would be better for a physician to produce no books in court, and to rely upon proving his claim without them. If his books were called for by the defense, we think they would have more value as evidence than if the physician brought them forward himself. If—what is not the case—physicians kept books as merchants do, or if they kept them with the design of using them in lawsuits, a different form from that now almost universal in the civilized world would have to be adopted. Each item would

have to be entered in full—words and figures indicating plainly the service rendered and the charge made for it.

But this cannot well be, and physicians may as well know that there never has been published a single pocket record or visiting list which can be used in court as evidence to establish a claim against a debtor, under the rulings of courts which are now in force. This, we believe, is rarely of much consequence, for suits are rare, and in most cases a physician who cannot collect on such evidences of indebtedness as most physicians keep, would do well to remember what Shakespeare makes Dogberry say to the watchman who asked what he should do if a suspicious character would not "stand" when halted in the Prince's name. "Why, then," says Dogberry, "take no note of him, but let him go; and presently call the rest of the watch together, and thank God you are rid of a knave."

ABORTIVE TREATMENT OF SYPHILIS.

The diagnosis of chancre from chancroid is, at times, one of the most delicate, as well as one of the most difficult, in surgery. The presence or absence of induration cannot be relied upon as of infallible significance. It is on account of this uncertainty, that, in the treatment of syphilis, the prevailing method of awaiting the development of secondary manifestations, without the institution of measures directed to the removal of the primary lesion, has found the support it has. Should the venereal ulcer, by its course and sequelæ, prove to have been a chancroid, no harm has been done. If symptoms of syphilis develop, we have the means of successfully combatting them.

In the *Bulletin Medical*, February 1, 1891, Dr. Louis Jullien expresses his confidence in the possibility of aborting or modifying the course of syphilis, by excision of the primary lesion, before adjacent glands have become involved. In his opinion the chancre may be considered analogous to a malignant tumor, the thorough removal of which, with proper antiseptic precautions, is followed by primary union, substituting, in a few days, a process which it would otherwise take weeks to complete. Two cases are reported in which, after excision of the chancre, in one case for a period of more than three years and in another for ten years, there was no subsequent manifestations of syphilis. In a third, reinfection occurred after excision. In other cases operated on, it was thought the symptoms were favorably modified.

In two cases in which glandular involvement had already taken place, injections of calomel were made. These were followed by swelling of adjacent lymphatic glands, for which the designation hydrargadenitis has been created. In neither did secondary symptoms appear.

In one other case of chancre of the glans penis and adjacent prepuce, with pronounced induration, which had persisted for a long period before cicatrization took place, in which corrosive sublimate was administered, no cutaneous eruption had been observed at the 139th day.

In estimating this report, it must not be overlooked that the evidence adduced is presumptive and negative. Every medical man knows that the only infallible sign of syphilis is the appearance of secondary symptoms, and that their absence must always as fully cast doubt upon the accuracy of the diagnosis, as suggest the efficacy of the treatment. Abortive treatment has still some who believe in it, but it is still—in the words of a well-known U. S. Senator—an "iridescent dream."

ELECTRICITY IN THE TREATMENT OF EXTRA-UTERINE PREGNANCY.

The investigations of the last few years have thrown much light upon the subject of extra-uterine pregnancy. Fifteen years ago it was considered a very rare condition, so rare as scarcely to be of practical interest; and when met with, medicine was practically

powerless. The physician stood by with folded hands and saw his patient die of hemorrhage; at the most he gave stimulants and narcotics. Now, it is known that ectopic pregnancy is a common condition, at least, in urban communities. It is well recognized also that its cause is antecedent salpingitis, and, best of all, instead of being almost uniformly fatal, the mother's life can now be saved almost always by prompt abdominal section, and removal of the product of gestation.

The history of the use of electricity in the treatment of ectopic pregnancy is full of interest. Introduced at a time when abdominal surgery was in its infancy, and promising to be a safe and reliable cure for a condition universally regarded as fatal, electricity, in this country, became the recognized method of treatment. This was largely due to the genius of T. G. Thomas. Every candid man must admit that much good has resulted from the labors of those who have advocated the use of electricity in the treatment of this condition. Study of the whole subject was stimulated, and the medical world was prepared for the marvels which have since been accomplished by surgical interference. With the introduction of an ideal method of treatment, electricity is falling into disuse; and would be quite abandoned, but for the efforts of its partisans. But now, even its loudest claimants award electricity only a small field of usefulness. It is universally agreed that after rupture of the gestation sac, with hemorrhage into the peritoneal cavity, electricity is useless. Life can be saved only by prompt operation. This class of cases embraces almost all seen in practice. Where extra-uterine pregnancy is diagnosticated prior to rupture, the advocates of electricity claim that it should be used as a feticide, and that operation should not be done. Under these circumstances, abdominal section yields almost perfect results, and in good hands such cases practically all recover. On the other hand, evidence has accumulated that electricity cannot be depended upon to save life. Cases are on record in which, in spite of its use, the ovum has continued to develop; in which death has occurred from hemorrhage with and without rupture of the sac, while the patient was undergoing, or waiting to undergo, the electrical treatment; and in many cases in which the growth of the ovum has been arrested, a diseased mass has been left in the pelvis, liable to cause peritonitis at any time. These facts are undoubted, and they amply prove that, in this class of cases also (sac unruptured), electricity must be rejected.

The value of treatment of ectopic pregnancy, when extra-peritoneal rupture of the sac has occurred—rupture into the broad ligament—is, at the present time, unsettled. There is reason to believe that this variety of rupture is infrequent. Those who consider it frequent argue that such cases undergo a spontaneous cure, as a rule, and only exceptionally cause trouble when the ovum continues to develop, and the fetus grows until term, or when a second rupture occurs, with hemorrhage into the peritoneal cavity. In this class of cases electricity might be used to destroy the fetus, when it survives the rupture, but the unreliability of the agent will probably prevent its employment, and prompt operation will usually be done.

The evidence is plain that, while electricity was useful before the modern advances in abdominal surgery, its employment at the present time is reprehensible. Its use does not protect the woman from the dangers of rupture and hemorrhage; and, at best, after its use diseased uterine appendages are left in the pelvis.

The experience of the writer embraces nine cases of extra-uterine pregnancy. This experience helps to confirm the modern doctrine that an extra-uterine pregnancy should be regarded as a malignant tumor requiring immediate removal.

It is certain that results have been obtained by operative treatment which fully justify acting on this presumption.

Book Reviews.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the Reporter.]

DISEASES OF THE DIGESTIVE ORGANS IN INFANCY AND CHILDHOOD, with Chapters on the Investigation of Disease, the Diet and General Management of Children, and Massage in Pediatrics. By Louis Starr, M. D., Late Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, etc. Second Edition—illustrated. 8vo, pp. 396. Philadelphia: P. Blakiston, Son & Co., 1891. Price, $2.50.

The admirable features of Dr. Starr's well-known book are so familiar that an extended review seems unnecessary. The first one hundred pages are devoted to the investigation of disease and the general management of children. These pages are worth the entire price of the book. We wish the second part, on the general management of children, could be read and laid to heart by every mother. The third part treats of massage in pediatrics, and was not contained in the first edition. The author follows Murrell in his descriptions. A point to be remembered, Dr. Starr says, is that those cases in which massage is immediately followed by a sensation of comfort or by refreshing sleep are most benefited by the manipulation. On the contrary, those patients who are stimulated by it, derive little benefit and are perhaps positively injured.

The rest of the book deals with diseases of the digestive organs proper. The author has added, in this edition, sections on alterations in the odor of the breath in disease, on urine alterations, and a detailed account of second dentition and its influence on the health in late childhood: a subject which he thinks has been greatly neglected hitherto.

The whole book is thoroughly clinical, contains a large number of useful formulæ, and is just what every one who has much to do with diseases of children will find helpful every day.

DE LA MALARIA. By Dr. Edouard Pepper, Laureate of the Faculty of Paris. Large 8vo, pp. xvi, 287. Paris: G. Masson, 1891.

Prof. Peter, in his letter prefatory to this volume, writes of the author, "'Living in a village of Algiers, you have not had at your disposition any library,' you say. Well, I congratulate you, for you have described facts in accordance with nature, and free from the influence of foreign ideas." This sentence furnishes a key to the characteristics of the book, although it can hardly be said that one has been uninfluenced by the views of others, who seems to be so familiar with a large variety of practical writers, and with a great variety of remedial measures, although it is true that, living apart from the influence of large cities, large libraries, and educational centres, unusual opportunity seems to have been furnished him to study the natural phenomena of the diseases which he describes, and to report the results of different modes of treatment. Dr. Pepper's book contains detailed reports of the history of a good many cases, and a very full exposition of the reasons for the views he holds in regard to his subject. The author, as an American living abroad, has retained his connection with American literature so as to be able to compare, as he does, the preparations of the American pharmacopœia, for example, with those of the French, sometimes decidedly to the advantage of the former—as in the preparations of phosphorus and hamamelis. His book contains, also, numerous references to American writers and American medical journals, and altogether it is a very interesting study of malaria, especially in its relation to other infectious diseases of cosmic origin. The Reporter does not furnish room in which to give any adequate idea of the exact nature of its contents, but the book may be commended to those who wish to study the views of one who has devoted much time to a subject of great medical importance.

INOCULATION FOR RABIES AND HYDROPHOBIA. A Study of the Literature of the Subject. By Surgeon-General C. A. Gordon, M. D., C. B., Honorary Physician to Her Majesty the Queen, etc. 8vo, pp. xii, 127. London: Bailliare, Tindall & Cox, 1887.

Surgeon-General Gordon belongs to that class of investigators who were not carried away by the rush of professional approval which greeted the announcement of Pasteur that he had a means of preventing hydrophobia. In England, for some time, such an attitude towards Pasteur made men singular, but it is a singularity which has been shared by some of the most prudent and discreet men of Great Britain. Surgeon-General Gordon has written several brochures on the subject of rabies or hydrophobia, and this one is of great interest and value. Opposing senseless scares, it attempts to give a rational notion in regard to the actual manifestations and best treatment of hydrophobia. It is a sensible book and calculated to be useful to all who will consider it with judicial fairness.

Correspondence.

Repeated Puerperal Convulsions.

To the Editor.

Sir: Will you kindly answer through the columns of the Reporter or by letter the following question, which I think important, and on which I am unable to find any literature.

Where puerperal convulsions have occurred in first labors, what are the probabilities of their re-occurrence in subsequent labors?

Yours truly,
W. T. Davison.

Canton, Pa.

[It is well known that about eighty per cent. of eclamptics are primiparæ. Nearly one-third of such primiparæ die. Twenty per cent. of eclamptics are multiparæ. This percentage is made up, not only from those who have recovered from a first attack of puerperal convulsions, but also from the great army of those who have escaped eclampsia in their first labor. One case of eclampsia occurs with about every four hundred labors. Hence, in general, it is evident that if a primipara recovers from eclampsia, the prospect of a recurrence of the disease in subsequent pregnancies is slight.

But while this is true in general, it is not so in particular cases. If the eclampsia be due to chronic Bright's disease, which has antedated the pregnancy, and the first attack does not prove fatal, eclampsia and

death is almost certain to follow, should pregnancy again occur. The same is true if the eclampsia complicating the first pregnancy be due to acute Bright's disease, which becomes chronic after labor.

According to Tyson, when the convulsions are of an apoplectic character, and brain injury results, as hemiplegia, etc., should pregnancy again occur, fatal eclampsia may be confidently expected.

On the other hand, when eclampsia in primiparæ is due to primiposity—irritability of the nervous system, pressure on the kidneys or ureters caused by the tonicity of the abdominal wall—and when neither the brain or kidneys are left crippled by the attack, the probability of a recurrence of convulsions in subsequent pregnancies is not great.—Ed. Reporter.]

A Pin Eight Years in the Body.

To the Editor.

Sir: Eight years ago, Ella W., a Swedish girl, fourteen years old, while dressing, placed a pin in her mouth and accidentally swallowed it. It lodged in the throat, and caused considerable pain and uneasiness for a short space of time—probably an hour—when all pain suddenly ceased, and no more trouble was experienced. About four months ago, while engaged in some culinary work and in rolling up the sleeve of her dress, she noticed a small elevated spot over the internal condyle of the right humerus. Upon examination, the object was soon recognized as the pin swallowed some eight years before.

Being called in to examine the case, I found that the pin was just beneath the skin, and that the pin's head was nearest the surface; and upon making a small incision through the integument, I extracted the pin, which was in a good state of preservation.

At no time during the period of its passage from the throat to its location when extracted has it caused any inconvenience. In fact, it was entirely forgotten.

Having frequently heard of such cases as this, I have never had occasion to meet one until the present occasion.

Yours truly,

H. L. Brush, M. D.

Pleasant Grove, Utah.

Notes and Comments.

Tampon in Menorrhagia.

Dr. W. H. Mays, of San Francisco, has an interesting article in the *Pacific Medical Journal*, March, 1891, in which he advocates tamponing for obstinate menorrhagia.

He refers to the medicinal agents usually employed, the styptics and tonics, the hot douche and the curette, and says that when all these shall fail, as they frequently will, to check the propensity to bleeding, when the physician finds it borne in upon him that the more he treats the case the worse is the trouble becoming, there is a remedy at his command which, fearlessly used, will give him absolute control over the hemorrhage, namely, the tampon.

At the threshold we are likely to be confronted with an old prejudice. Would you dare to arrest the menstrual flow? In one instance where it was proposed to tampon at the end of the first twenty-four hours of mensturation, he was told that the blood would surely "go to the head" and work dire results. The function has been hedged about with a peculiar sanctity, and the dangers of interfering with it greatly exaggerated. Dr. Goodell in a recent paper says: "I have learned to unlearn the teaching that woman must not be subjected to a surgical operation during her flux. Our forefathers taught that the presence of a menstruating woman would pollute solemn religious rites, would turn milk sour, spoil the fermentation of wine, and do much other mischief in a general way. Influenced by hoary tradition, physicians generally postpone all operative treatment until the flow has ceased. But why this delay, if time enters as a factor in the case? I have found menstruation to be the very best time to curette away fungous vegetations of the endometrium, for being swollen they are then larger and more readily removed than at any other time." While we may not agree with this writer as to the advantage of curetting during the flow, the quotation shows the drift of gynecological opinion concerning the supposed danger of interfering with a menstruating woman. So little importance does Professor Loewenthal, of Lausanne, attach to the old superstition, that he advocates the complete and repeated suppression by artificial means of the menstrual flow in chlorosis, and publishes a record of twenty-three cases so treated, all of them with benefit.

In illustration of the use of the tampon in menorrhagia, Dr. Mays related the following case, from his practice.

A. B., aged twenty-seven, had been the subject of menorrhagia for three years before coming to him. The disorder was gradually acquired, its origin being ascribable to no cause that could be gleaned from the patient's history. No particular excess of pain accompanied the molimen, but she simply

bled freely, passing clots after the first day and soaking napkin after napkin throughout a period of four or five days. Most of the period was of necessity passed in bed, owing to prostration. During the inter-menstrual intervals she would drag herself around, weak, pale and nervous, but the exhausting hemorrhages, repeated with unrelenting regularity, were sapping her strength and making her existence a miserable one. She had been under treatment the greater part of this time, and about four months before coming to him had been carefully curetted.

On examination he found nothing abnormal in the position or shape of the pelvic organs. The sound revealed some little elongation of the uterine canal. There was no endometritis.

He explained to her that the mucous membrane being set bleeding, the tendency was to keep on bleeding, and, as in the case of a cut finger, the indication simply was to stanch the hemorrhage by pressure. This he proposed to do each month by the aid of the tampon, after she had lost as much as in his judgment she could afford to lose. She readily consented. So at the next menstrual epoch, after allowing the flow to continue for thirty hours, he proceeded to tampon the vagina. Drawing back the perineum with a Sims speculum, pieces of cotton wrung out of an alum solution were packed firmly and tightly, first behind and then in front of the cervix, then at the sides, gradually building a solid mass occupying the whole caliber of the vagina, until the vulva was reached. A compress and T bandage completed the procedure. Four hours later the outermost wad of cotton, which pressed on the urethra, had to be removed to allow of urination. On removing the tampon after forty-eight hours, no evidence of further hemorrhage was observable, and the patient rose stronger than had been customary.

At the next menstrual period, the tamponing was repeated. For some reason the packing was not done so solidly as before, and some blood soaked the tampon and escaped from the vulva, though not much. A month later the tampon, applied on the second day, proved a perfect means of control. So also at the next and at several periods immediately following. The patient has only been "packed" twice during the past six months, as the flow rarely now, with proper care on her part, transcends the natural limit. She was gaining in color and weight, and enjoyed better health than for years previously.

This case is typical enough; it is not necessary, Dr. Mays says, to cite others in support of his argument. The tampon is essentially the thing in what may be called uncomplicated cases of menorrhagia. When subinvolution is acting as the cause, it is often the best remedy to employ. Even where the grosser forms of uterine disease are present it may be recommended, for it should be remembered that menorrhagia alone, by its exhaustive waste, its depraving of tissue, and the nervous and circulatory disturbances it sets up, will, itself, produce uterine inflammations, vegetations, flexions, etc.

Bearing on this subject, Dr. Mays quotes from Dr. Gehrung, whose able article is found in the *Journal of Obstetrics*, November, 1888.

"Every practitioner will recall a number of these pitiful cases of broken-down constitution, nervous to the verge of insanity, complaining of the ills that flesh is heir to, who under treatment improve for a while until the next return of the menses mercilessly destroys all that has been gained. The poor woman passes from the hands of the neurologist to the gynecologist, and then back again, until exhausted in confidence, blood and means. Each in his turn has honestly done his best, each is conscious that each recurring menstruation destroys the fruits of his labor."

"The tampon is the remedy which stands at the disposition of every practitioner, whereby he may regulate the amount of loss in menstruation according to the necessity of the case."

Dr. Bizzell, of Georgia, advocates repression of the menstrual flow in menorrhagia, while other agents prove unavailing or are contra-indicated. Quoting Dr. Taliaferro he says: "By this method we have a marvelous therapeutic resource." Cases that have obstinately resisted other methods yielded promptly to this. He prefers, however, the intra-uterine tampon, which consists of a roll of cotton about the length and thickness of a lead pencil. This is iodoformed and carried up through the os to the fundus with a slender dressing forceps, packing it in tightly. The vagina is also tamponed. It is left *in situ* seven or eight days.

Dr. Mays's experience is against the intra-uterine tampon. On the only occasion on which he tried it, colicky pains of a very violent character ensued, necessitating a speedy

removal of the offending cause. Dr. Gehrung states that in a case in which he resorted to the intra-uterine tampon it made matters worse, the uterus relaxing so completely that blood found its way freely around the plug.

Vaginal tamponing skilfully done will prove entirely satisfactory. Dr. Mays adds that in applying the strips of dampened cotton, it is well to work with two pairs of dressing forceps, one pair to press the tampon in an opposite direction from where the next piece of cotton is to be placed with the other pair.

Treatment of Recent Hernia by Aspiration.

In the *British Medical Journal*, February 7, 1891, Dr. John Hern says: On being called some years since to a case of recently strangulated hernia which I failed, under chloroform, to reduce by taxis, finding the tension in and distention of the protruded gut apparently the main obstacle to reduction, I emptied it by means of my hypodermic syringe, with the result that reduction was at once easily accomplished. I have since repeated the operation on thirty-two occasions, in twenty-eight of which reduction was readily accomplished, and in the remaining four, three were, subsequent to aspiration, subjected to the usual operation (with one death from gangrenous gut), and one steadfastly preferred death to further operation, and succumbed on the tenth day. In neither of the three cases of herniotomy could any traces be found of the previous aspiration, due I think, to two causes, the small size of the needle used and the arrangement of the muscular fibers in the wall of the gut.

The class of cases which have appeared to me most suitable for the operation are recent cases—36 to 48 hours or less; where the patient or friends refuse to submit to herniotomy. The simple aspiration can be designated "doing a little something." The advantages claimed for this procedure are:

1. It avoids the delay almost inseparable from the herniotomy, for example, gaining consent of friends, procuring adequate assistance, etc.

2. It avoids rough and heroic attempts at reduction by taxis by placing in the hands of the general practitioner a means of reduction easy of application, and requiring no extensive surgical skill for its performance, and, moreover, a proceeding, which, by reducing the tension of the protrusion, lessens the danger of the taxis subsequently employed.

3. It avoids the risks of pyemia and septicemia, inseparable from all operations in which skin is divided.

Let us consider in how far this operation is based on a consideration of the anatomical and pathological conditions present. We must remember that the internal abdominal ring, the inguinal canal, the external abdominal ring, the crural ring, the crural canal and the saphenous opening in the fascia lata of the thigh are all bounded chiefly, if not solely, by aponeurotic structures, which have become thickened and resistant although the openings have all become dilated. The margins of these openings forced back and thickened offer a strong passive resistance, so that if the protrusion becomes distended in any way by feces or flatus, the neck or narrow portion is so wedged into these fascial openings or canals that it becomes compressed, the venous circulation impeded (both arteries and veins are, of course, compressed, but the thicker coats of, and the greater force of circulation in, the former render them less affected by the pressure), the proportion between the protrusion and the opening or canal through which it has descended becomes so altered, that the hernia becomes irreducible. Now, seeing that (in recent cases, at any rate) it must be the distention of the protrusion which is the main obstacle to reduction, there having elapsed no time for the effusion of lymph or other inflammatory changes to occur, having failed to reduce by taxis, it appears to me to be a perfectly justifiable proceeding to at once empty the protrusion of whatever fluid or flatus it may contain, and having thus lessened its bulk, to reduce by taxis.

Impure Milk in Large Cities.

The *New Orleans Medical and Surgical Journal*, February, 1891, says editorially: Persons residing in the country, or in small towns away from the great centres of trade and competition, have no idea of the many frauds perpetuated by the vendors of the commonest articles of food consumed in large cities. Not least among these is the adulteration of milk with dirty water, or some other substance designed to give it a creamy appearance and cause it to pass

muster before the dreaded lactometer of the officers of the Board of Health.

It has now become the practice in all cities to keep dairymen under surveillance, so that at least the proportion of adulterants added shall be comparatively small. New York and Chicago and other cities have regular milk inspectors, whose sole duty is to procure and analyze samples of this article offered for sale, and to prosecute criminally all persons who sell other than the natural secretion of the cow. Our own Board of Health has for the past five years made regular examinations of milk, and, by following up the offenders to the recorder's court, has succeded in materially improving the standard of milk sold in the city of New Orleans. Some points of general interest were brought forward in a recent report of the chief sanitary inspector, and we will venture to quote a portion of it, as the conclusions to be drawn therefrom are obvious. We can see from this what an easy thing it is for the public to be imposed upon and cheated by their milkmen, to whom they are paying the highest prices for the poorest quality of milk.

This is bad enough, but when we consider who are the persons consuming this fluid and what is the character of the adulterant consumed, the question comes home to us more directly as medical men. We have simply to refer to our mortuary records for May and June of any year and study over the large mortality among children from the bowel diseases, and then, when we think of the sour, stale, watered or adulterated milk that many children are fed upon, we may, perhaps, be willing to discard the antiquated idea of "teething" being a cause of most of these complaints, and attribute a larger proportion of the deaths to improper nourishment.

The substances usually used for adulterating milk are starch, sodium, chloride, borax, chalk, glycerine and bicarbonate of soda. When milk has been skimmed and watered its creamy appearance may be restored by the addition of condensed milk from cans, a common practice in New Orleans.

But what seems to us to be most injurious of all the substances added to milk by the New Orleans dairyman is simple water. This water is from cisterns or wells situated in the swamps back of town and is often teeming with the germs of malaria. Besides, there is the danger to milk from cows drinking ditch water, from which a number of apthous diseases are known to have arisen. Much more might be said upon the danger of impure milk to young children, particularly in reference to tyrotoxicon, a poison generated in stale and sour milk, but we shall have more to say on this subject at another time.

In conclusion, we heartily endorse the following assertions of Mr. J. Lewis Smith:

"In order to obtain milk of the best quality, it is necessary to procure it from a dairy remote from the city, where there is good pasturage, an abundant supply of water, and the health of the cows is promoted by out-door life in open meadows. Stabled cows, in or near the city, fed with distillery food, hay, and in part by kitchen refuse, do not furnish good milk. Such cows are likely to have dirty udders, and their milk, chemically inferior to that of pastured cows, becomes in the open pails the receptacle of bacteria, which are abundant in stables of ordinary cleanliness. Milk, therefore, that is suitable for the nursery in the summer months is obtained at a distance from the city, where cows have the range of the fields, and lie at night in the open air upon the grass."

The Vital Statistics of New York State in 1890.

The *New York Medical Journal*, February 7, 1891, says: The annual mortality-sheet of the New York State Board of Health has appeared for the year 1890, giving the total deaths by eight sanitary districts, by months, and by the usual principal causes. The deaths for the whole State, with a small correction for the non-reported mortality in some rural sections, were 127,630, in a population estimated at 6,000,000; this is equivalent to a death-rate of 19.6 to the 1,000. The mortality from zymotic diseases was less than in recent years, a decline being registered in scarlet fever, diphtheria, typhoid fever, and diarrhœal disorders. Measles showed a marked elevation. Small-pox caused four deaths. Epidemic influenza is estimated to have caused not fewer than 5,000 deaths in the early months of the year, but it did not operate to raise the zymotic mortality, for the reason that a large proportion of its deaths was certified under the head of respiratory and other local causes. There were 18.000 deaths from respiratory diseases, a number greatly in excess of

former years; this is non-inclusive of consumption, which was charged with 13,800 deaths. From unclassified causes there were 18,728 deaths.

Diagnosis of Previous Pregnancy.

From a medico-legal point of view it is sometimes of the greatest importance to determine whether a woman has ever borne a child or not. According to Dittrich, as quoted in the *Deutsche medizinische Wochenschrift*, January 29, 1891, from the *Prager medizinische Wochenschrift*, microscopical examination reveals hyaline degeneration and necrosis of the muscular tissue of the uterus and, in rare instances, of the muscular fibers of the tunica media of the arteries as well, in cases in which a woman has been pregnant even though the gestation has been prematurely terminated.

Medical Attendance for the Poor in Richmond.

The *Virginia Medical Monthly*, February, 1891, says that Richmond, with its nearly 100,000 population, has no city hospital, except the hospital wards in its almshouse. No other city, in Europe or North America, of anything like its population, so far as we know, is without its distinctive city hospital for the cure of its sick or wounded working classes. The City Council has just voted $2,000 annually, to be divided among four physicians, to be elected, located in different parts of the city, whose duty it shall be to attend the deserving poor of their respective four districts of the city, without charge.

The Medical Law of Alabama.

The *Alabama Medical and Surgical Age*, February, 1891, says that the "Penalty Bill," which recently passed the Legislature, gives Alabama a model medical law, and places the State Medical Association on a safe and sound basis. The penalty bill, as it passed the Legislature, provides that any person practicing medicine or surgery in this State, without having first obtained a certificate of qualification from one of the authorized Boards of Medical Examiners of this State, shall be guilty of a misdemeanor, and on conviction thereof shall be fined not less than twenty-five dollars nor more than one hundred dollars. Provided, that this act shall not apply to any doctor practicing medicine in Alabama who is a graduate of a reputable medical college, and who has complied with the law by having his diploma recorded by the Judge of Probate in the county in which he is practicing.

The *Age* says: "Much credit is due to the committee appointed by the Montgomery County Medical Society, consisting of Drs. Baldwin, Gaston, Blue, Wilkerson, Hill, Sealy and Andrews, for the work they did during the session of the Legislature. The irregulars had one or two men on the floor, and used the newspapers for all they were worth, and occasionally resorted to circulars, but this committee, faithful to themselves, their society, the medical profession and the people of Alabama, was able at every point to combat the inroads of the demagogue, upset the schemes and plans of the irregulars and prevent the evils which would have resulted from such vicious legislation as they desired. We cordially welcome all worthy physicians to Alabama, and in doing so, we assure them of fair, just and honest treatment, regardless of name, school or previous condition, but the Legislature of Alabama has said that the Medical Examining Board must protect the people from the imposition of quacks, demagogues and incompetent men, and by the authority invested and for the sake of suffering humanity, and for the protection of the people, we promise that our Boards of Examiners will be equal to the task."

Association of American Physicians of Berlin.

About forty American and Canadian physicians held a meeting on February 19, 1891, at Berlin, in order to found a permanent organization such as exists in Paris, London, Edinburg and Vienna. Prof. Miller, of the University of Pennsylvania, now Professor at the University of Berlin, called special attention to the fact that such an organization would not only greatly benefit the physicians who remain here for purposes of study, but also that it would call the attention of Germany to the forward tendency of American medical science. He strongly urged the publication of the transactions of the Association every year. Permanent organization was effected, Dr. Judson Daland, of Philadelphia,

being elected President, and Dr. F. Weber, of Milwaukee, Secretary,

Prof. Miller, Dr. Amos, of Iowa, Dr. H. Douglas, of New York, and the President and Secretary were elected as a Committee on Constitution.

Dr. H. T. Brooks, of New York City, Dr. Louis Frank, of Louisville, Dr. Crystal, of Baltimore, Dr. Neal Mitchell, of Florida, Dr. Marple, of New York, and Dr. Kennedy, of Montreal, were appointed a Committee on information to new-comers, and organization of special private courses.

The objects and scope of the society are:

First, The arrangement of medical work and the formation of special private courses so that any desired instruction may henceforth be obtainable at this University.

Second, The giving of advice to new-comers regarding instruction, lodgings, books, instruments, etc.

Third, The reading and discussion of papers of general interest and the exhibition of patients and demonstration of specimens in all lines of work taken up by members.

Fourth, The furthering of mutual ends by a more extended acquaintance of the physicians here.

The society at its first session listened to an interesting demonstration of specimens of myocarditis segmentaire and of a blood cyst of the aortic valve, by Dr. Henry Douglas, of New York City. Dr. Weber then demonstrated specimens of blood of leukemia and pernicious anemia, and talked of the value of Ehrlich's method of blood-staining. Dr. Daland talked about malaria and relapsing fever in Russia, and demonstrated the pathological micro-organisms of these diseases. An interesting discussion of these papers followed.

Drs. Fitzgibbon and Mead, of Wisconsin, and Navy Surgeon Kenyoun, were present as visitors. Prof. Miller then offered the use of the Dental Lecturing Room of the University, Dorotheenstrasse 40, as a permanent meeting room for the society.

New-comers and others desiring information will please apply to or address the Secretary, Dr. Fredk. R. Weber, Charité, Berlin.

Golden Belt Medical Society.

The regular quarterly meeting of the "Golden Belt District Medical Society" for the annual election of officers, and mutual entertainment of the profession, will be held in the club-rooms of the National Hotel, Topeka, Kansas, April 9, 1891.

The large attendance in the past bespeaks a thriving condition of the Society, and a large attendance is desired at this, our most important meeting of the year.

The programme provides, for the afternoon session: A Report of a Case of Nymphomania with Treatment, by L. R. King, M. D., Junction City; A Report of Some Cases of Cystitis with Treatment, by J. H. Garey, M. D., Wilsey; Report of a Case (not described) by C. H. Guibor, M. D., Topeka.

For the evening session: A paper on Some Recent Improvements in Intestinal Surgery, with Demonstration upon the Dog, by Emory Lanphear, M. D., Kansas City, Mo.; one on Phimosis, Local and Remote Results, by A. H. Cordier, M. D., McPherson; one on Peri-Uterine Inflammation, by Chas. W. Adams, M. D., Kansas City, Mo., and the Annual Address by the President, P. Daugherty, M. D., Junction City.

The officers of the Society are: President, P. Daugherty, M. D., Junction City; First Vice-President, W. N. King, M. D., Abilene; Second Vice-President, Z. T. Harvey, M. D., Council Grove; Secretary, F. B. Browne, M. D., Salina; Treasurer, T. N. Gunn, M. D., Chapman.

State Board of Medical Examiners.

The Regents of the University of New York have appointed State Boards of Medical Examiners as follows:

From the Medical Society of the State of New York: for three years from September 1, 1891, W. W. Potter, of Buffalo, William S. Ely, of Rochester, and Maurice J. Levi, of Albany; for two years from September 1, 1891, William C. Way, of Elmira, and George R. Fowler, of Brooklyn; for one year from September 1, 1891, J. P. Creveling, of Auburn, and Eugene Beach, of Gloversville.

From the Homœopathic Medical Society of the State of New York: for three years from September 1, 1891, William S. Searle, of Brooklyn, Horace M. Paine, of Albany, and Asa S. Gosh, of Fredonia; for two years from September 1, 1891, John McE. Wetmore, of New York, and Jay W. Sheldon, of Syracuse; for one year from September 1, 1891, E. E. Snyder, of Binghamton, and A. R. Wright, of Buffalo.

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Clinical Lecture.

A CLINICAL LECTURE ON SOME EVERY-DAY CASES OF DISEASES OF THE EYE.[1]

BY HOWARD F. HANSELL, M. D.,
CHIEF OF CLINIC.

Occlusion of Canaliculi.

Gentlemen: The Professor of Ophthalmology in unavoidably absent to-day, and has requested me to occupy his hour.

The first case is one of acquired occlusion of the canaliculi. The patient lost her right eye through scarlet fever at four years of age. She presented herself at this clinic several weeks ago, to consult us as to the advisability of wearing an artificial eye. Upon examination it was found that the commissure of the lids had been shortened by an obliteration of the inner canthus. The eyeball was atrophied, reduced to nearly one-half the size of its fellow and slightly painful on pressure in the ciliary region. She was advised that an artificial eye might light up an already smouldering inflammation and induce sympathetic ophthalmia; moreover the eye was hopelessly blind and unsightly. The ball was enucleated in your presence by Prof. Thomson. Healing progressed favorably. A few days later the inner canthus was restored to its normal size by a plastic operation, but the canaliculi were replaced by cicatricial tissue. She now wears a glass eye and is greatly improved in appearance, but complains of constant overflow of tears. With a Graefe knife I now divide the cicatrix over the obliterated lower canal, thrusting its point inward as far as the nasal bone. With a probe the opening is enlarged. The latter process must be repeated several times during the next week, to prevent the walls of the new canal from growing together.

[1] Delivered at the Jefferson Medical College Hospital, January 16, 1890.

Stricture of the Lachrymal Duct.

This patient makes the same complaint we heard in the preceding case, but here the epiphora is due to a closure of the duct in one or more places by inflammatory thickening of the mucous membrane which lines it. Its cause might be found in some co-existing nasal catarrh or hypertrophy of the nasal mucous membrane, but frequently we are at a loss to establish a cause. As in the former case, I insert the point of a Weber's knife into the lower puncture, thrust it along the canal until it reaches the sac, and elevate the handle, thus making the canal a gutter. I then pass the knife down though the duct, dividing the stricture. This must be followed through several weeks by probing.

Lachrymation is a symptom or an accompaniment of many eye diseases, such as conjunctivitis, keratitis. Chronic lachrymation, or a constant overflow of tears, is unusual, unless as a symptom of chronic conjunctivitis, an everted lower lid or closure of the lachrymal canal. In the last condition only do we resort to the above operation. In old cases collection of pus and muco-pus constantly form in the sac, and are easily expressed. In such cases no doubt as to the diagnosis can exist. The result of the divulsion of the stricture either by knife or probe is not always favorable. Indeed I venture to assert, that few operators have been satisfied with their experiences. The treatment is painful, long continued and often unsuccessful, so that, as a final resort, a canulated silver style must be worn.

Soft Cataract.

The next case is one of soft cataract. This patient was treated by me several years ago for iritis serosa with dense vitreous opaci-

ties in the left eye without success. A cataract developed in the interval, and he now returns to have it removed. He is only twenty-five years old. Therefore, although the cataract is mature, the lens is soft and cannot be extracted according to the method pursued in the treatment of cataracts recurring after the age of forty or thereabouts. It must be needled, and usually more than once. While this procedure is extremely simple, it is not unattended with danger. Some of you may remember a similar case last winter in a healthy man, aged 25, who suffered with congenital cataract. After needling, glaucoma developed, and notwithstanding sclerotomy and iridectomy we were compelled to enucleate the ball on account of the dangerous condition to which the man was reduced, having lost twenty-five pounds in two weeks. I have warned this patient of the dangers and given rather an unfavorable prognosis, in view of the preceding inflammation, and he is willing to take the chances. The ball is free from injection, light projection is good and temperature is normal. I introduce a stop needle half-way between the centre of the cornea and its periphery, into the pupil dilated with atropine, and thrust it into the lens. By moving the point of the needle in various directions the lens is broken up and protrudes into the anterior chamber through the ruptured capsule. If the wound in the capsule remains open, the cataract will become absorbed; if not, the operation must be repeated.

Blindness from Neglected Iritis.

The next case is one of great interest, and I would ask you to give it your particular attention. Mary N., thirty years old, is nearly blind in both eyes from the effects of old iritis. In order that you may have a clear idea how this sad condition has resulted from an inflammation, which under proper and timely treatment would have been cured, please follow me closely in the brief consideration of the pathological changes that have here taken place. Inflammation of the irides, probably of syphilitic origin, developed two years ago, leaving the vision considerably obscured through exudation into the pupils. The papillary margins became totally adherent to the lens capsules, closing the channels of communication between the posterior and anterior chambers, compelling retention of normal secretion in the posterior chambers with consequent enlargement of those chambers by bellying forward of the irides and closure of the angle between the iris and the cornea. The adhesions or posterior synechiæ have been constant causes of recurring attacks of iritis, each of which caused still further deterioration of vision. To-day we find the ciliary vessels injected, the anterior chambers shallow, the pupils almost occluded, the fields of vision concentrically limited and central vision greatly deteriorated. Secondary glaucoma is threatening and will certainly develop unless the channels of communication are re-established by an iridectomy in each eye. I find the operations difficult, on account of the firm posterior synechiæ, but I am gratified to see that the new pupils are clear, the exudation being confined to the papillary margins.

This case conveys two important lessons to you as future practitioners. In iritis, keep the pupils dilated by means of frequent applications of strong solutions of atropine; in circular or annular synechiæ perform iridectomy.

Internal Strabismus.

I have to show you, lastly, a case of internal squint. As you are aware nine-tenths of all cases of this affection are the result of hypermetropia, and in most of them one eye is amblyopic. This patient has hypermetropia and astigmatism, which have been corrected during paralysis of accommodation. The vision of one, the fixing eye, improved to normal. The other, the squinting eye, to one-fifth only. The operation is undertaken chiefly for cosmetic purposes; for although the axes of vision should be made parallel, I have no anticipation of improving the vision in the amblyopic eye. By careful division of the conjunctiva of the tendon at its attachment to the sclera, and of the tendinous fibers which sometimes form broad lateral attachments, the effects of the operation may be safely regulated; and hence I always prefer in both high and low degrees of apparent abnormal convergence to operate on both internal recti. I will carefully sever each tendon, using the small hook, suggested by Stevens, rather than the large one commonly employed.

—Arecoline, the volatile liquid alkaloid of the areca nut principally affects the heart. It is excreted unchanged.

COMMUNICATIONS.

CONSTRUCTION AND ADAPTATION OF SPECTACLE-FRAMES.[1]

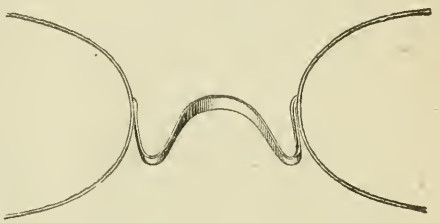
BY CHARLES HERMON THOMAS, M. D.,
PHILADELPHIA.

The treatment of ocular defects by means of glasses involves, beside the optical correction, a factor of no less practical importance —their mechanical adjustment. The purpose of the present paper is to direct attention to some of the mechanical aspects of the subject, particularly to the principles involved, and to certain methods of mounting spectacle-glasses. The results of the most accurate refractive measurements may be entirely vitiated by a faulty position of the correcting glasses; not only so, but new sources of eye-strain may be created by the very means adopted to remove an existing fault. Correcting glasses are remedial agents, just as orthopedic appliances are, and, as such, are powerful for evil as well as good, and hence everything belonging to them falls within the duty of the prescribing physician. The optical centre of a lens is generally that part of the glass which we wish to bring before the pupil, as it and the part of the lens immediately surrounding it are freest from aberrations of all sorts—distort least. Occasionally, however, it may be desirable to displace this point by a definite amount; in any case, we should insist on having the optician carry out our directions as regards the manner of mounting and the position of the glass with the same exactness that he employs in making it of the proper strength.

The purpose of the spectacle-frame is to hold a pair of glasses before the eyes in a definite position and with the least possible annoyance to the wearer. To accomplish this, I devised a plan about thirteen years ago (1878) for the construction of spectacle-bridges, which plan provides especially for a wide range of adaptability and the consequent accurate adaptation of spectacles to individual faces of almost every conceivable form. No account of the principles involved has heretofore been published, so far as is known, although some special forms of the bridge, as originally made under my direction, have come into almost universal use, being known throughout the optical trade under the name saddle-bridge.

Previous to the introduction of this bridge it was not practicable to obtain spectacle-frames suitable for persons with unusual forms of nose or face or with excessively prominent eyes or long lashes. Then, beside the ordinary "regular bridge," there was nothing better in use than the "X-bridge" or the equally unsatisfactory "snake-bridge," in both of which the combined weight of the glasses and frames was often borne directly upon the crest of the nose, besides which they usually failed to place the glasses in the correct position before the eyes. Few could wear either of the latter with comfort, and those who succeeded often did so only by padding them with wrappings of thread, thus making an unsightly cushion at the point of contact with the nose. The bridge (Fig. 1) under the plan

FIG. 1.



Saddle-bridge—typical form (back view).

referred to consists of (1) a nose-piece of arched form, of flattened wire and made to conform accurately to the shape of the nose at a definite point of selection, crossing the bridge of the nose at right angles and so resting saddle-wise upon it—whence its name. (2) A pair of adjustable return-pieces or arms, to the extremities of which are attached the rims or clasps carrying the glasses. These arms are produced by bending outward upon themselves the limbs of the wire from which the arch of the bridge has been formed, and are given whatever special direction may be required to place the glasses in the desired position before the eyes of the individual wearer. The bridge consists, then, of an arch and two adjustable arms, which, while fixing the glasses in their proper position before the eyes, should furnish as nearly an immovable support as possible.

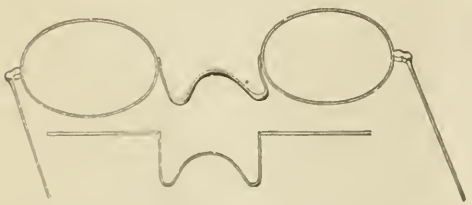
The bridge of the nose close to its root being the basis of support, the spectacle-bridge must be constructed with reference to this part. The wire of which it is made

[1] Read before the Philadelphia County Medical Society, February 11, 1891.

should be wide at the middle and taper towards each end, so as to make the bridge widest where it takes its bearing on the sensitive part of the crest of the nose. Narrowing the extremities is of special advantage, as it facilitates any necessary bending at that point in the process of adjustment. The sides of the arch should embrace the nose snugly without undue pressure, and extend well back towards the inner canthus, but not far enough to press upon the lachrymal sac. The saddle, or arch, as thus described, becomes the fixed support when it rests in its proper position. This position varies considerably in different persons, though on every nose there is usually one best point which should be sought—the point of selection, it may be termed. Unless the arch be adjusted to this particular point, the wearer will be rendered uncomfortable, and be continually shifting his spectacles. A few days' wear may be required to determine this point definitely in a particular case. The arch of the bridge, when once adapted to the nose, is not to be altered in position during any subsequent regulation or adjustment which may be required; it is to be considered as a definitely fixed support, whose situation is determined, once for all, by the conformation of the wearer's nose. Hence the position which the lenses are to take before the eyes does not directly depend upon the arch, but rather upon the length and direction of the adjustable arms attached to it, by variations in which the glasses may be made to take any required position. The arms are to be made long or short, they may be set high or low, pointed inward or outward, according to the requirements of any given case.

If the eyes be specially prominent, and the bridge of the nose be low, thus causing

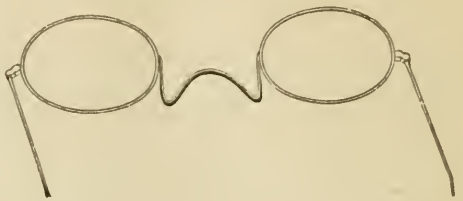
Fig. 2.



Saddle-bridge, with horizontal arms; for prominent eyes and long lashes.

the lashes to project beyond the level of the nose, the arms must be made relatively long (Fig. 2); or if the bridge of the nose be low or flat, and the eyes be placed relatively high it may be required to direct the arms perpendicularly upward (Fig. 3); or again, if the bridge of the nose be prominent, and the eyes sunken, the arms should be shortened, or even reduced to the minimum required for purposes of lateral and vertical adjustment.

Fig. 3.



Saddle-bridge, with vertical arms for flattened nose; eyes high.

The height of the eye as related to the part of the nose on which the arch rests—the point of selection—determines the amount of slant, if any, to be given to the arms. In practice it is found that in by far the larger proportion of cases the arms are nearly horizontal, slanting slightly upward; in exceptional cases they slant downward below the horizontal; and in rare instances it is necessary to give them an almost perpendicular direction upward. The angle which the arms make with the clamp or rim carrying the glasses must vary according to the directions of the arms, in order to keep the plane of the glasses perpendicular to the visual lines. The arm, where it is soldered to the rim, or the clasp of frameless glasses, is slightly bent in an upward direction. Increasing or diminishing these curves changes the position of the glasses vertically, and so compensates for any degree of upward or downward slant of the arms. This may be necessary where, for example, the point of selection of the arch is low down on the nose; the arms must then ascend vertically to raise the glasses to a level with the eyes; but this position of the arms will cause the glasses to assume an approximately horizontal direction—parallel to the visual lines—if the arms meet the rim at or about a right angle, as they usually do; in such a case, the arm must be bent so as to join the lens at an oblique angle or even lie in the plane of the lens.

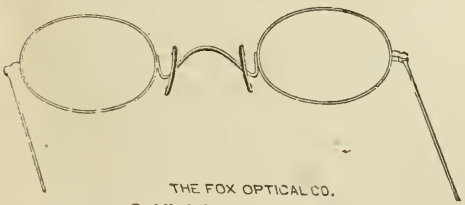
The proper adjustment of a pair of spectacles in ordinary cases is largely determined, as we have seen, by the length and direction of the arms. In special cases, also, as in asymmetry of the face, the compensation required is to be effected by the same means. In some cases the arms may need to be of unequal length. It is of frequent occurrence

that the centres of the pupils on the two sides are unequally distant from the centre of the arch. When this condition exists it is to be met by varying the direction and, it may be, also the length, of the arms. It is important from the point of view of the optician, to note that the principle adaptations of the bridge are preferably to be made extemporaneously and with the patient present. In this way, with a variety of sizes of the typical form at hand, the skilful mechanic is able to produce any particular modification which may be required without specially constructing the frames, even for atypical faces. It is often desirable to take the conformation of the nose at the point of selection. This may conveniently be done with lead wire, and the outline thus obtained may—by "rubbing"—be made a part of the record of the case.

Variations in the size of the lenses employed will also necessitate modifications in the lateral adjustment of the arms. To get the advantages of a large glass in cases where the distance between the eyes is relatively small, the arms will have to be bent inward—made to approach each other. The opposite direction may have to be given them in cases of unusual width of face. Lateral supports, or clamps, which take their bearing lengthwise on the sides of the nose near the base, as in eye-glasses of the best construction, have occasionally been employed by others in combination with spectacle-frames, but usually in form and by mechanical means not wholly satisfactory.

I have recently had made by the Fox Optical Company a combination of the eye-glass clamps with the saddle-bridge (Fig. 4), which is neat and simple in construction,

Fig. 4.

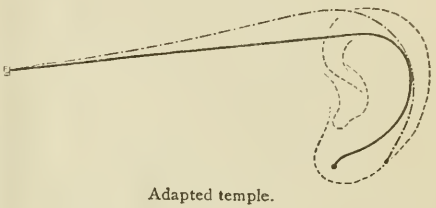


Saddle-bridge: with clamps.

and which combines the advantages of both in great degree. The attachment is so made as to preserve the adjustability both of the bridge and the clamps. The special advantage of this combination is that it distributes the pressure over a larger surface, and upon parts better able to sustain it than does the arch of the bridge alone.

The side-pieces, or temples, should be specially adapted to the ear with as much care as the bridge is to the nose in each individual case. They should be hooked around the ears for constant use and be so formed as to retain the bridge at the point of selection on the nose, and thus secure a fixed position of the entire appliance. The

Fig. 5.



Adapted temple.

curve of temples, as ordinarily made, is of far too great a radius. It takes its bearing behind the ear upon a limited surface, and so is liable to cut; it fails to secure a proper hold to prevent its riding upward, and it often exerts spring-pressure productive of pain and injurious to ears and nose alike.

An adapted temple, designed to fulfil the above indications and obviate these defects, has recently been constructed under my directions, and has borne the test of use so well as to justify its continued regular employment (Fig. 5). The wire of which it is made passes back in a straight line to the top of the ear, at which point it is bent somewhat abruptly downward, and is made to conform accurately to the posterior surface of the conch close to its junction with the head, where it rests in contact with the ear, but without perceptible pressure. Asymmetry in the height of the ears, causing tilting of the frames from the level, is to be met by a compensating adjustment in the temples, *i. e.*, bending the temple upward on the side of the higher or downward on the side of the lower ear—or both—and so dividing the result between the two sides.

The glasses should be slightly inclined from the perpendicular, so as to bring the lower edges somewhat nearer the face than the upper, which is to be effected by giving the temples the appropriate angulation at their junction with the hinges when it is impracticable to change the direction of the hinges themselves.

The material of the frames should usually be gold of a good quality and of a weight as light as is consistent with strength and steadiness. Steel rusts too readily and is

not well adapted to the adjustments frequently required—more especially in the temples. Silver is so soft as to be almost worthless.

The lenses themselves should usually be as large as the face of the wearer permits: seldom less than 28x38 mm. for an adult, and not infrequently as large as 29x40 or 30x42 mm., in order that the eyes may be well covered in their ordinary lateral movements. Such large lenses are hardly more conspicuous than small ones—especially if frameless glasses be used—because they allow the eye itself to be easily seen. The reflections from the edges of frameless glasses which are so annoying to some persons may be avoided by slightly dulling the polish on the lower edge; the source of this reflected light being usually at or above the level of the eyes, the reflection enters the eye from this edge alone.

The glasses should be worn as close to the eyes as possible, without touching the lashes. Occasionally, where the lashes are especially long, with feathery or uneven ends, they should be neatly trimmed with the scissors—a little procedure best practiced when the eyes are closed. It is also to be borne in mind that the subject has an artistic aspect and that by giving proper consideration to this phase much can be done to remove the opprobrium which frequently attaches to the wearing of glasses. The neat adjustment of a pair of frameless gold-mounted spectacles is doubtless the best that can be accomplished with spectacles in this respect.

I have limited myself to a description of no one form of bridge, nor even of a number of special forms, but the effort has been made rather to demonstrate *the mechanical principles involved in the construction and adaptation of spectacle-frames suitable to all the requirements of practice.* By the means proposed it is practicable to secure the correct position of the glasses before the eyes, together with comfort to the wearer and a satisfactory artistic effect, thus fulfilling the three principal indications of spectacle-mounting.

FRENCH ANTISEPTIC ELIXIR.

Carbolic acid, crystallized	5 parts
Tincture of iodine	10 parts
Essence of citron	3 parts
Essence of mint	5 parts
Alcohol of 60°, sufficient to make . .	1,000 parts

UNUSUAL CASE OF PELVIC ABSCESS.

BY ALEXIS M. LÉON, M. D.,
NEW YORK.

A collection of pus in the cavity of the pelvis may be the result of one or more distinct inflammatory processes. Primarily the cause may be (1) an injury, (2) a tubercular process, (3) a suppurative inflammation occurring in an ovarian tumor for hæmatocele, or (4) a puerperal infection.

Again, its seat may be (1) in the connective tissue of the broad ligaments, (2) in the general cellular tissue of the pelvis, or (3), as a result of peritonitis, it may be enwalled by peritoneum. A pyosalpinx might also be considered a form of pelvic abscess.

By far the most frequent form of the disease under consideration is a cellulitis of the broad ligaments due to puerperal infection. Authorities have not considered, however, that the variety or seat of the inflammation in the pelvis has much to do with the symptoms or course of the disease. The diagnosis, it is believed, can be easily made by the symptoms of septicemia and the physical signs of the existence of a tumor in the pelvis. The termination of the cases, if left to Nature and if the patient survive the septicemia. is said to be in the discharge of the abscess either (1) "through the abdominal walls and saphenous openings, (2) into the pelvic viscera, as the bladder, rectum, vagina or urethra, (3) through the floor of the pelvis near the anus, (4) through the pelvis foramina, either obturator or sacro-ischiatic, (5) through the pelvic roof into the peritoneal cavity or (6) into the lumbar region in the position of the kidney." (J. Braxton Hicks.)

This general view of pelvic abscess embraces both the common and unusual forms of the disease. The cases presenting, together with marked constitutional symptoms, a palpable abscess in the pelvis, which, in a short time discharges or is relieved by operation, are of comparatively frequent occurrence. But the cases wherein the diagnosis is difficult, and no tumor or swelling is discoverable by examination are rare. Yet, probably, both classes are produced under the same conditions, and are originally located in the same parts of the pelvis. The interest in these latter cases, therefore, lies in the fact that occasionally a collection of pus, due to any of the causes of pelvic ab-

scess, may reside in the pelvis and escape detection. And this fact does not seem to have been very generally stated.

The following case illustrates this difficulty in diagnosis. It is unique, also, in its chronicity, its spontaneous cure, in the uncertainty of its seat of origin and in the course or directions of the burrowing of the pus.

The patient, 29 years old, a native of Italy, married and the mother of four children, was a stout and strong woman, whose family history was good and who never remembered having been sick, with the exception of an attack of scarlatina some years before. Two years ago she had resided in a malarial district. Her last child was born April 8, 1888. Her labor was managed by a midwife, and is said to have been easy and natural. During the last months of her pregnancy, however, she had not felt perfectly well. She was languid, complained of headaches and had noticed slight puffiness about the face and ankles. After her labor all progressed favorably until the third day, when, it is said, fever set in. On April 16, eight days after the confinement, I saw the patient. At this time she complained of feverishness and loss of appetite; the bowels were loose; she was having two or three watery passages per day, and there was a profuse inodorous white discharge from the uterus. Temperature, 104°; pulse, 120; respiration, 30. She complained of no pain and there had been no vomiting.

Examination of the heart and lungs was negative, except that a few râles were heard at the bottom of the chest, posteriorly. The liver was not enlarged; the spleen was somewhat enlarged. Some tenderness was found, on deep pressure, over the fundus uteri and to the left of it. The uterus itself was subinvoluted and the cervix was lacerated. By conjoined manipulation, no particular tenderness and no tumor could be determined in the broad ligament or in any part of the pelvic cavity. The uterus was freely movable, and movement did not cause pain.

On the following day there was amelioration of the symptoms. Temperature, 102°; pulse, 110. The discharge still continued—profuse and inodorous, and the patient declared she felt no pain. During the three days following the improvement progressed. On April 20, examination showed the uterus to be much smaller in size. The tenderness had disappeared and the discharge had ceased abruptly. The fever continued, however, together with the diarrhœa. The movements from the bowels were large, watery and bad smelling. The temperature varied from 100½° to 101½° in the morning, from 102½° to 103½° in the evening, when profuse sweating would set in, often lasting through the whole night. Occasionally in the afternoons the patient would complain of chilly sensations; though no marked chill occurred. She now became emaciated and markedly anemic. Anorexia was complete; so that nourishment was given with difficulty. The urine was slightly albuminous and showed a few granular casts and renal epithelia under the microscope. This condition of the patient persisted during the next three weeks with but little change. The temperature gradually sank; so that by the end of this time it did not rise above 100° in the morning, or above 101° in the evening, and was sometimes lower; and the pulse-rate fell correspondingly. Antipyretics, it may be stated, had little or no effect, however. The sweatings, too, became less frequent and of milder character. Digital examination showed the uterus to be of normal size and in proper position, freely movable and its movements free from pain. No tumor could be found in the pelvis, and no tenderness was elicited by bimanual touch. The result of rectal examination with the finger was also negative.

By May 15, the albumin and casts disappeared from the urine and the morning temperature fell as low as 99°. The patient made efforts to sit up, but was unable to remain out of bed. Under treatment the anemia became less marked and the appetite began to return; so that occasionally she could eat a little solid food. She did not gain strength, however.

About May 23 she called attention to a stiffness and pain in the left groin. This was occasioned by straightening out the leg. There was no swelling or redness about the parts and no tenderness either about the abdomen or leg. The thigh was kept partially flexed and rotated inwards, and the pain made it impossible to fully extend the leg. When standing or attempting to walk, the pelvis would be tilted to one side and only the toes of the left foot would touch the ground. The amount of pain and stiffness and the flexure of the thigh varied from day to day. On June 5, careful examination (which had been employed daily since the appearance of the symptoms about the leg) revealed some fulness in the left

lumbar region, but no fluctuation. Deep pressure over this spot caused some pain. This swelling increased during the next four or five days and could readily be mapped out—about four inches in diameter, not projecting far outwards and causing no discoloration of the skin.

It was proposed to introduce an aspirator needle, and if pus were withdrawn to cut down upon the needle and drain the abscess. The patient would not consent to any surgical procedure and even refused to be aspirated. On this account the case was out of observation from the 11th to the 25th of June. On this day the patient's general condition was found to be about as before. The swelling in the back had increased somewhat, and external to the quadratus lumborum. The skin was red and the tissues hardened and infiltrated. This redness extended slowly forwards from day to day along the abdominal wall, in a line parallel to the crest of the ilium, until the groin was reached. The skin here became thin and on July 3 opened, giving vent to about one quart of thick yellow pus, which continued to flow in large quantities for several days. Again the patient refused surgical aid and would not allow even probing of the sinus. At this time her fever disappeared, her diarrhœa stopped, her appetite returned and the flexure of the thigh began to grow less and less. The abscess continued to discharge for three or four weeks. From its situation it drained itself, and so was completely cured in that time. The patient grew strong and well and the flexure of the limb, after a while, entirely disappeared, allowing the patient to stand perfectly straight and to walk without difficulty. On June 25, 1889, she was delivered of a healthy child, after a normal labor.

It will be observed in reviewing this case, that distinct signs of pelvic inflammation occurred at no time except during the first few days, when the discharge from the uterus was present, and the signs were, then, more of endometritis than of cellulitis; that the abscess was probably in existence six weeks without presenting any local signs, such as pain, tenderness, swelling etc., and at the end of this time the only sign was the flexure of the thigh and the pain on effort of extension; that it was two weeks longer before the fulness in the lumbar region occurred, and two weeks longer still before the skin showed positive evidence of the inflammatory process beneath it; and that it was nearly three months in all before the abscess was discharged. These general features may explain why the diagnosis was not made positive until the appearances in the loin presented themselves. Previous to this time the picture was one of continued fever with diarrhœa, and more or less septic infection; and it was recognized that such condition might be produced by typhoid fever, acute miliary tuberculosis, or an abscess causing pyemia.

It should be stated that this patient was several times examined by different consultants, without their being able to locate any lesion in the pelvis, notwithstanding the fact that attention was directed at first to the pelvis as the seat of the disease and repeated efforts were made to find an abscess whose existence was suspected. The question of the exact location of the primary abscess is, on this account, not settled with certainty. It is likely, however, that its seat was in the left broad ligament. Its small size in the beginning, together with the fact that its contents, were drained through the uterus, would explain why no tumor could be appreciated. And there must have occurred early in the history of the case adhesions between the abscess and the posterior wall of the pelvis as high up as the brim, and perhaps higher. In this manner the tumor, as it grew in size, was pulled further and further out of reach by any ordinary examination; though it is possible that examination by the introduction of the hand into the rectum might have given some idea of its existence. It is conjectured, therefore, that the abscess began in or near the fimbriated end of the Fallopian tube—since, in this location, it could discharge through the tube (as it seemed to do at first) and, being movable, could form adhesions posteriorly.

Cases similiar to this one are reported by Dr. Skene, in his text book of *Diseases of Women*, and reference to them may supply the actual appearances presented by dissection. Dr. Skene relates these as cases of "pelvic cellulitis, with certain complications which, so far as I know, have not been noticed or described heretofore." The first patient, 37 years old, and the mother of six children, got up the fifth day after confinement, and was taken sick on the ninth day. She was in bed, but without medical attendance for six weeks, when she was seen by a physician who found all the signs of pelvic cellulitis of the left broad ligament and symptoms of septicemia. Four weeks later

she was admitted to the hospital for operation. She was then in a very enfeebled condition, her temperature varied from 100° to 103°, and there was flexure of the left thigh. The abdominal symptoms had subsided. Laparotomy was done by Dr. Skene, "and a most careful exploration of the pelvis was made by the touch. The left broad ligament was considerably thickened and much less elastic than it should have been, showing the effect of the inflammation, which had subsided. Not the slightest sign of any point of suppuration could be found, but by the bimanual touch, with the fingers of one hand in the abdominal cavity and those of the other on the outside, I detected obscure fluctuation, indicating that an abscess or sinus extended along that side of the abdomen. The location of the pus having been clearly marked, the wound in the abdomen was closed and an incision made in the side down to the pus." The cavity, which was narrow at its lowest end, was found to extend to the diaphgram. It was washed out and a drainage-tube was introduced. The patient passed out of observation one month after the operation; at which time the wound was still discharging pus.

The second patient, 35 years old, gave a history of illness (fever) from the day of the birth of her fifth child. She was seen four months after confinement, when symptoms of septicemia were present, and there was also flexure of the right thigh. The uterus was apparently normal and movable, but high up and on the right there were evidences of inflammatory products. Explorations with the aspirator failed to discover pus. Laparotomy was performed, and pus was found in the right iliac and lumbar regions. The patient died three days later. "The autopsy showed that the abscess cavity extended from the right broad ligament upward behind the kidney and to the right of the spinal column to the diaphragm. The psoas muscle was involved in the abscess, but there was no bone disease, and it was the opinion of all who attended the autopsy that the disease began as a cellulitis of the right broad ligament."

These cases resemble the one I have the privilege of reporting in the following points. All began (probably) as a localized cellulitis of one broad ligament; sooner or later adhesions were formed between the abscess and the posterior pelvic wall; and the pus, then, tended to burrow towards the surface through and between the muscles. The track thus made by the burrowing pus, it will be noted, tended to close up and heal as the sinus advanced; so that, by the time the site of the abscess was upon the psoas muscle, the suppuration in the broad ligament had ceased.

These cases are certainly rare (I have not found any others reported), and the lesson of special interest they teach is, that a pelvic inflammation may result in an abscess, which, even early, may occupy a position out of reach by any ordinary examination; and such a condition may be difficult of diagnosis.

DOUBLE OPTIC NEURITIS OF MALARIAL ORIGIN.[1]

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MEMBER OF THE NEW YORK ACADEMY OF MEDICINE; ASSISTANT SURGEON, MANHATTAN EYE AND EAR HOSPITAL, ETC.

January 12, 1888, Mrs. F. K. W., fifty-five years old, consulted Dr. C. W. Packard, of New York, on account of failing vision. The patient was referred to me. She complained of a blur in the upper field. Upon examination I found moderate peripheric impairment of the field in the left eye. Right vision $=\frac{20}{15}$ W. $+.75$. Left vision, $\frac{20}{20}+$W. $+1.0$. Ophthalmoscopic examination negative.

January 13. The following morning the patient was led to my office by a daughter. R. V. $=5$ fingers; L. V. $=$ perception of light. She had retired the preceding evening, seeing as well as when at my office in the morning, and awakened practically blind. Right field with candle, quick and good. Ophthalmoscope showed marked papillitis, œdema of the disc, evident infiltration in and near the optic nerve, veins slightly enlarged, no pulsation, arteries about normal, outline of disc somewhat obscure, slight tortuosity of veins, no retinal changes apparent. Approximate swelling of $3\frac{1}{2}$ dioptrics of nerve.

Thinking the case of unusual interest, I took the patient to Drs. Agnew and Webster. They corroborated my diagnosis and expressed surprise at the rapidity of loss of vision.

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[1] Read before the New York State Medical Society, February 3, 1891.

January 18. Perception of light in each eye. January 22. V.=nil.

January 30. Sixteen days from beginning neuritis, complains of stiffness in knees. Has more or less difficulty in walking. When reclining, finds it impossible to turn over. This affection of the joints came on suddenly and in four days the patient could not rise from a chair without assistance. By being supported she could shuffle along the floor. On striking her quickly under the hip, the limb would fly up, and by this action she could ascend stairs. There was complete paraplegia. Exaggerated reflex, ankle clonus. In fact, she lost all locomotive power of the lower extremities. The skin felt thick and numb. Bladder unaffected.

February 5. Patient for the first time in fourteen days has perception of light. Has enough control of her limbs to enable her to move about with the aid of a chair.

February 22. Vision improving. R. V.= 10 fingers. L. V.=5 fingers. Color perception lost as far as could be ascertained. Six days later can distinguish bright red. Field good, retinal vessels slightly diminished in size.

March 7, 1889, thirty-nine days from beginning paraplegia, is able to walk. R. V.= $\frac{20}{200}$; L. V.=$\frac{4}{200}$. Field good, color sense diminished. Nerves pale, otherwise the fundi are normal, with the exception of slight decrease in caliber of arteries.

April 7, 1889. R. V.=$\frac{20}{40}$; L. V.=$\frac{20}{100}$. Color sense varies; calls red brown. Left nerve whiter than right.

April 17, 1889. Stiffness in knees entirely gone. Color perception impaired.

February 14, 1890, two years from initial papillitis, R. V.=$\frac{20}{15}$W.+.5 L. V.= $\frac{20}{20}$+W.+.5, which is a return to the original vision before the neuritis. Color sense decidedly impaired.

December 29, 1890, last examination and nearly three years from beginning neuritis, R. V. =$\frac{20}{15}$W.+.75; L. V.=$\frac{20}{20}$+W. +1.0. Ophthalmoscopical appearance: Rt. =nerve bluish white, veins normal, arteries slightly diminished; no tortuosity; lamina cribrosa plainly visible. Left=nerve bluish white, otherwise the fundus has a normal appearance. Color sense: pale yellow, green, or pink, looks drab; cannot distinguish green from blue. Right eye=the field for yellow is very much contracted. A little less for red, and less than normal for blue. Left eye=yellow visible in central vision only. Red, field tortuous in outline and very much diminished. Blue, contracted much less than in right, with a large scotoma in upper field. Field for white perfect in each.

The patient received a nutritious diet, iodide of potash, arsenic and strychnia.

During the entire illness, the patient was free from pain, slept well, appetite good, no nausea, no headache. The urine was examined several times, with negative results. No specific history. She has had eight children, all healthy, no miscarriages. Passed the climacteric at forty-two years. Mrs. W. has been a decidedly healthy woman, with one exception, and that exception is best expressed by the following extract from a letter written by Dr. Packard: "So far as I know, Mrs. W. has no specific taint, but she has a decided malarial taint. I have treated her during the past few years for several malarial attacks, accompanied with fever, characterized by periodicity, and that yielded to quinine. At such time she has suffered from gastralgia and enteralgia that I believed to have a malarial basis."

Résumé.—An apparently healthy woman consults an oculist because of a slight blur in her vision. He finds both fundi normal, pupils slightly dilated and responsive to light. During the same night she becomes practically blind. The only apparent cause is a marked papillitis. This continues to be an idiopathic affection for sixteen days, then she has a paraplegia. The vision becomes totally lost. In fourteen days, upon a relaxation of the paraplegic symptoms, the sight gradually returns; and in two years is normal, with a decided defect in color vision.

Was the neuritis an idiopathic affection, or was it concomitant to the paraplegia, and what was the existing cause of both?

Optic neuritis is often accompanied with headache, nausea and vomiting; and it usually occurs from some intra-cranial disease, tumor or other adventitious product.

With tumor the progress is inclined to be slow and the prognosis grave. To be brief, let us exclude tumor as a cause, also meningitis and sclerosis and Bright's, for palpable reasons.

Retro-bulbar neuritis (von Græfe).—A condition in which we may have a sudden loss of vision. The pupil is usually widely dilated and not responsive to light. The disc becomes slightly elevated. Arteries small, veins tortuous.

"In retro-bulbar neuritis in the acute form, we have headache, orbital pain, in-

creased by movement of the eye and pressure. Serous effusion of the optic disc and retina due to compression of retinal vessels." (Knapp.)

In Noyes's admirable treatise on the eye (1890) he describes a toxic retro-bulbar neuritis, where the atrophy succeeding the inflammation is due to a lesion of the axial fibers of the nerve, and cites a case of Uhthoff's, where he localizes the character of the lesion in color scotoma. If there is a retro-bulbar neuritis due to tobacco and alcohol poisoning, why may there not be a similar affection due to malarial poisoning?

There are certain affections due to the action of malarial poison upon the system. There is a *bacillus malariæ* particularly affecting the spleen. This bacillus has been found in the blood during the fever, causing marked changes in it.

Let us turn our attention to another cause of papillitis, denied by some, *i. e.*, distention of the sheath, or hydropsia of the optic nerve, which is a serous effusion into the optic sheath coming from the cerebral arachnoid space.

"A fluid effusion into the arachnoid space and increased intra-cranial pressure are always associated with an accumulation of fluid in the intra-vaginal sheath, which œdema will cause a swelling of the optic nerve." (Schwalbe.)

"The intra-cranial pressure must force the fluid from the arachnoid space along the sheath of the optic nerve into the canal-like system present in the lamina cribrosa, causing swelling and congestion of the disc." (Pagenstecher.)

Bull says, loss of vision from isolated papillitis alone is never sudden, and that distention of the sheath alone is not sufficient to produce papillitis, but may intensify it. Hughlings Jackson is of the same opinion, and the latter also says there is nearly always a visible stage of neuritis before sight fails.

Macnamara, in his text-book of disease of the eye, cites a case precisely similar in many respects to the one in question. A girl, aged thirteen, was attacked with intermittent fever, after which she had paralysis of the lower extremities, and a partial inability to move the right arm. Pupils dilated and insensible to light. Optic papillæ swollen and hazy, with serous effusion into the nerve and surrounding tissue. She became quite blind. Her recovery was gradual and perfect, both as to the paraplegia and vision. He remarks that this is an example of a class of cases not very uncommon in India, and depends upon malarial poison affecting alterations in the blood. He gave, as a direct cause, a serous effusion into the optic thalami and corpora striata. The pressure thus exerted on these nerve centres, interfering with the volition of the patient over the affected limbs, and the serous effusion or exudation into the papilla and pressure upon the optic nerve fibers causing the loss of vision.

I offer this paper as a contribution to the literature on optic neuritis. I am aware there may be double optic neuritis with and without loss of vision, also with gradual or sudden loss of vision. But, as a rule, there is a stage of neuritis visible before the blindness. Here the fundi were known to be normal a few hours before an almost total loss of sight.

101 Park Avenue.

ADHESION OF SOFT PALATE TO PHARYNX; OPERATION; CURE.[1]

BY HAL FOSTER, M. D.,
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The patient, a man 40 years old, by occupation a seaman, and a native of France, applied to me November, 1889, complaining of shortness of breath. He wanted to know if anything could be done to restore his speech. He was able to utter a sound, but he could not turn this sound into words.

He had contracted syphilis twenty years before. He was married, and his wife had miscarried three times. One child was born living, and is now twelve years of age, and apparently in fair health. This communication was made on paper, as the patient was unable to talk. His nose was entirely eaten away down to the nasal bones, so that all that remained was a small opening in the face. The nasal fossæ would fill up with large green crusts, which he dislodged with a hair-pin every morning and evening. The stench from these crusts was exceedingly offensive. I took out two, which were fully ten and a half inches in length, and shell-like in form. The patient's mouth was so

[1] Read before the Medical Society of the Missouri Valley, December, 1890.

closed up by syphilitic adhesions that I could pass in my two fingers only with great difficulty, by stretching the mouth to its utmost capacity. A laryngoscopic view of the throat at this stage was impossible.

The first operation I undertook was enlargement of the mouth, which was done by means of a knife. Afterwards little wooden stretchers or gags were inserted, to prevent the wounded surfaces from growing together again. After this was accomplished, I found that the uvula and the lower part of the soft palate were entirely destroyed, and the remaining part of the palate was firmly adherent to the pharynx, so that the upper pharynx was completely separate from the lower pharynx. The complete occlusion of the two pharynges is extremely rare. I have met with it in only three cases. It is by no means rare in tertiary syphilis of the throat to find a partial adhesion of the parts; but it is extremely rare to find a complete adhesion. Often a small opening can be discovered, sometimes only large enough to admit a small probe, but still large enough to admit a small current of air.

In this case I covered the lower pharynx with iodoform and filled the nasal fossæ with water. My iodoform was not moistened.

I now determined to liberate the palate from the pharynx, so that I could give my patient nasal breathing, and also give the nasal cavity an outlet into the throat. I first passed a silver probe down through the nose to the pharynx, and with a tenotomy knife cut where the palate bellied. After I had thoroughly separated the palate from its attachment, with no little difficulty, the parts were sprayed with a solution of tannin. No anæsthetic of any kind was used. I now began to pass the largest sound I could obtain through the opening into the pharynx. I afterwards had a sound made after the following description. The body of the instrument was about two inches in length, and it was blunt-pointed at the end, and gradually as it reached the base, it was somewhat similar to a triangle in shape. The base was an inch and a half in width. To the broad end of the instrument was attached a long handle, so that it could be manipulated in the throat. I found that with this instrument I could keep the opening the required size and prevent it from closing. Had the wound not been treated with sounds after cutting, the opening would have filled up in a very short time.

This is a peculiar characteristic of syphilitic tissue, where we seek to enlarge an opening, whether it be in the pharynx or nasal fossæ. In a case of nasal stenosis now under observation, I have seen the parts close completely after opening the nasal canal three times, every time giving the patient complete breathing space, taking out at each operation a large piece of cartilage at the point of union. In a short time the parts were firmly adherent again.

The parts in this operation healed nicely, and within four days absolutely no pain was felt from the passage of the instrument. An examination of the larynx showed complete paralysis of the abductors of the vocal cords, and the whole mucous membrane lining the larynx was in a state of hyperemia. This accounted for the loss of voice. At the beginning of my operations, I had placed my patient under iodide of potassium; but I was compelled to give him 90 grains, three times a day, before I could produce any effect. I do not consider this an unusually large dose in cases of tertiary syphilis of the throat and nose, and have often given larger doses and maintained them during a longer time. This was given in Vichy water; his stomach stood it nicely, and I kept this amount up for two weeks, when it was gradually reduced. Later I gave him only tonic doses. Within a month and a half from the time of the first operation on the mouth, the patient had entirely regained his voice, and had gained something like fifteen pounds in weight. His voice was now quite clear and strong. I had an artificial nose made for him by Tiemann & Co., while I was attending the Manhattan Throat Hospital of New York last August, which supplied his missing member very well. I gave him one of the sounds above described, and told him to use it once or twice a week for a year. I often hear from him, and he reports the breathing through his artificial member excellent, and his voice good.

Syphilis from a Bite.—A patient was recently shown to the Berlin Medical Society with syphilis from the bite of a man. The bite was on the lip. The wound healed in two or three days; but in six weeks it reopened and the lip became greatly swollen. Five weeks later there was an ulcer on the inner surface of the lip with great swelling and induration round about; the submaxillary and cervical glands were much enlarged. After some time a typical syphilitic eruption made its appearance.

PERISCOPE.

Some New Medicinal Soaps.

In its Periscope of Dermatology, the *Edinburgh Medical Journal*, February, 1891, says: Eichhoff of Elberfield, who has already added to the list of medicinal soaps some of real value, and embodying some valuable improvements, has continued his researches into the subject. He reviews the conditions of the skin in which soap treatment is to be recommended. This is specially indicated in cases where the skin is unctuous. The soap removes the excess of fat, while the incorporated drug, if suitably chosen, acts at the same time on the disease itself, and, as Eichhoff thinks, can chase the offending organisms from the ducts of the cutaneous glands. He quotes in support of this the treatment by medicinal soaps of psoriasis, which he regards as parasitic, and of acne, the pustules in which are now believed to be due to the pyogenic micrococci. He praises also the cleanliness, the innocuousness, and the cheapness of this method with the vigor of a true partisan.

Soaps may be, for convenience, divided into—1. Alkaline, containing an excess of free alkali; 2. Neutral, in which all the alkali is combined with the fatty acids; 3. So-called acid soaps, which are prepared either by the addition of weak acids, or by being superfatted, and eventually react faintly acid. The alkaline may be used to remove masses of scales; while in acute inflammations of the skin, or when it is irritable, the neutral or superfatted soaps are to be employed. The superfatting of the new soaps consists of 2 per cent. lanoline and 3 per cent. olive oil, and they are made by Ferdinand Mühlens at Cologne. Among these new soaps may be specially mentioned a *menthol soap*, containing 5 per cent. of menthol. The local anæsthetic influence of menthol on the skin is well known, and the principal use of this soap will probably be found in lessening pruritus. Eichhoff cites some cases where cure resulted in pruritus senilis and pruritus genitalium. He recommends that, should the soap be employed for the head or face, the eyes should be kept firmly shut, else an unpleasant, though, he says, not dangerous, coldness of the conjunctiva is perceived. A 5 per cent. *salol* soap is one which may prove useful in psoriasis. The salol when so used with water breaks up into carbolic and salicylic acids, and these in their nascent condition may be expected to act with energy. A 5 per cent. *resorcin* soap promises to be of advantage in cases where this valuable drug is indicated.

Ligation of the Saphena Vein in Cases of Varicose Veins.

The *British Medical Journal* (Supplement), January 24, 1891, says: Professor Trendelenburg, of Bonn, in a contribution to the last number of the *Beiträge zur klinischen Chirurgie*, advocates double ligature and division of the large saphena vein in the treatment of varicosity of the lower limb involving both the trunk and branches of this vessel. In some remarks on the pathological anatomy of varicose veins it is pointed out that the most prominent and dilated portions of the affected vessel are found below, and not, as is generally supposed, (? REPORTER) above the valves. The walls of the vein, being weaker here than at any other point, yield to the pressure of the blood when the valves cease to act. According to Trendelenburg, most of the blood which fills the dilated trunk and branches of a varicose saphena vein is derived from above, and has descended from the iliac veins and the vena cava, and but a small portion of it comes from the capillaries of the foot and leg. When the subject of varicose veins exchanges the horizontal for the vertical position a large quantity of blood at once descends from the large veins of the abdomen into the dilated veins of the lower extremity. It is this free downward flow of blood along large and dilated vessels deprived of valves that causes the profuse and dangerous hemorrhage so frequently produced by a breach of the surface of the leg when in a condition of varicosity. The conclusion that the troubles and dangers of those suffering from varicose veins of the lower limb are due for the most part to the fact that the varicose branches of the great saphena, in consequence of associated dilatation of the trunk of this vein, are no longer separated from the vena cava by valves, has led Trendelenburg to treat varicosity by permanently obstructing the saphenous trunk at one point with the view of preventing the descent of blood from the abdomen, and thus relieving the veins of the leg and foot from the abnormal pressure. After obstruction of the flow of blood through the main trunk of

the great saphena, the venous circulation will be maintained by communicating branches between the superficial and deep veins. Reference is made to a series of cases in which good results followed such treatment, which consists in exposure of the vein near the saphenous opening, in the application of two catgut ligatures, and in the division of the vessel between them. It is acknowledged in this paper that occlusion of the great saphena is by no means a novel plan of treatment in cases of varicosity of the lower extremity. It was practiced by Paulus Ægineta, and advocated by Ambroise Paré, and at the end of the last century Sir Everard Home performed this operation on twelve cases with very unfavorable results.

Vaccination of Children.

Dr. E. F. Brush, in a paper on Infant Hygiene, read before the Jenkins Medical Association and published in the *Archives of Pediatrics*, February, 1891, makes some pertinent remarks on the subject of vaccination, saying that this important hygienic measure, if physicians are not more careful in regard to the operation, is liable to be brought into disrepute. In 1883, while Dr. Brush was occupying the position of attendant physician to the New York Infant Asylum, he examined the arms of one hundred and ninety-one children who had been vaccinated and deemed sufficiently protected. Of these he found only thirteen with a well-defined, pitted scar; only one had two well-defined, round and pitted scars; fifty-one had no scars at all, although they had been vaccinated; the remainder had scars in various forms, shapes and colors; no vaccination had been performed for three months previous to the examination; nevertheless, some of the arms were still crusted. The majority of the older scars contained cicatrices, long, irregular, varying in dimensions from one inch to two inches; some had purple ridges in the centre, some red, others had cavities blue and red with puckering edges. Many of these children were vaccinated sucessfully, showing that, notwithstanding the severe and destructive processes that had previously taken place in the arm, they were not protected. A baby should be vaccinated at four months old, unless it is necessary to do so earlier. Physicians should see the child on the fourth and eighth day after the operation, and satisfy themselves that there is a proper formation of a vaccine vesicle. Vaccinations are constantly seen that are reported to have taken because sores have been generated by the operation which in no way simulate the vaccine vesicle.

It is preferable to vaccinate a child at four months, because this is usually before dentition takes place. In regard to dentition, it is an exceedingly dangerous thing for the physician to teach the mother that any severe attack of illness is due to teething, for she is very apt to delay the physician's attendance on her child that is ill during the dentition period. Dentition, *per se*, is not the cause of any severe attack of illness. The most severe condition due to teething alone is a slight ephemeral fever, a cough or an eruption, not in any way making the child ill enough to require medical attention. Of course, the irritation that is sometimes caused in the gums will make more severe a disease due to some other cause, and the child, during dentition, that is at all affected by this normal process, is more apt to be attacked by the prevailing diseases.

Washing in Cold Weather.

The *Nightingale*, February 14, 1891, says: If your face chaps easily and is uncomfortable in cold weather, try the following: Get a fine quality of Indian meal. Take a handful of this meal and pour boiling water over it. Then add enough cold water to reduce the whole to a bearable temperature. Take into your two hands some of the dry meal, wet this in the water as prepared and scour the face with it, using it upon the hands as you would use the lather of soap. Finally, rinse the face in the specially prepared hot water and dry. Use the towel, sparingly, so that the face may dry partly by evaporation. If afterwards you pass the hand over the face you will be surprised at the smooth comfortable feel which has been given to your irritable skin. You will also find it less sensitive to the wind and cold.

What is accomplished by this process? In the first place the skin is thoroughly cleansed by the handful of uncooked meal, the little particles of which scour out the sebaceous ducts as no amount of soap can do. It is almost impossible to cultivate a crop of black-heads and adhere to this treatment. In the second place the meal over

which the boiling water was poured has been partly cooked so that a soupy consistency is given to the water in which your face is bathed. This dries in a film over the skin, protecting cracks and rendering it much less likely to catch dust. Try this method of taking care of your skin. It is not at the time so enjoyable and does not seem so clean as the old soap and water method, but the results are far superior.

Multiple Herpes Zoster.

In a Clinic Report in the *Medical Chronicle*, February, 1891, Dr. James Mackenzie, of Victoria Hospital, Manchester, says: On account of the rarity of such cases the following appears worth recording.

Mrs. L., aged 51 years, a widow lady in comfortable circumstances, tall and of full habit of body, had been attending four days at a bazaar, when, at times, from over-crowding, the atmosphere was very impure. Previous to this she had been in good health. The second morning, after attendance at the bazaar, she felt intense smarting pain in the right armpit. On looking there she observed a few small blisters. A few hours later a similar pain was felt in the left armpit, and there also a few blisters appeared. During the night and next day there was severe pain shooting down the inner side of both arms, as low as the elbow. Occasionally a feeling of numbness and pain extended down the ulnar half of the left forearm, and to the two inner fingers. Pain also appeared to shoot down the chest, as low as the level of the nipple. There was also pain in the throat and in the nose. Shooting, burning pains were also felt on the inside of the thighs, and small blisters appeared on both thighs and on the nates.

I examined her on October 19, 1889, four days after the beginning of the complaint. In addition to the sensations which she voluntarily described, I found pain and tenderness along the whole spinal column, much aggravated by the slightest pressure on the separate vertebræ. This was worst over the two lowest cervical and upper two dorsal vertebræ. In each armpit there was a large patch of vesicles occupying the hollow of the armpit, about three inches in diameter. On the right side there was a thin irregular streak of papules descending on the side of the chest as low as the level of the nipple. Two days after, these had developed into small vesicles full of clear transparent fluid. On the edge of the posterior fold of the axilla and descending for a few inches towards the inside of the arm was another streak of papules that likewise in a couple of days developed into a crop of vesicles.

On the inner aspect of each thigh, about six inches below the pubes, there was an irregular oval patch of vesicles. The patch on the right thigh measured two inches by one, while that of the left was somewhat smaller. The patches occupied similar positions on each thigh. To the inside of the right fold of the buttock, two inches from the middle line and midway between anus and vagina, was a small irregular red patch, but no papules nor vesicles. She complained of the same peculiar pain here as occurred in the armpit, arm and thigh. She also felt the same pain in the identical spot on the opposite side, but was extremely surprised when I said there was no eruption.

There were also two raw sores about the size of a split pea on either side of the septum of the nose, about an inch from the external opening of the nostril. She said that these had been small blisters, and the pain had been so annoying that she had burst them in the hope of getting relief. The fauces were sore, and looked red in patches, but there were no vesicles.

The illness pursued a very severe and painful course for the next two months. Every few days there would be recurrence of the pain, causing sleepless nights. The situation of the pain was most frequently down the inner half of the left arm, forearm, hand, and two fingers (little and ring fingers). Less frequently and less severely the pain would strike down the same places on the right arm. Occasionally the pain occurred in the face, generally in the cheeks, both at once and on identical places, and also on the inner side of the upper part of the thighs and upper part of the chest. On all those places there developed, after an attack of the pain, an eruption, sometimes limited to one or two papules, some of which developed into vesicles—sometimes a crop of vesicles covering an area the size of a florin, sometimes a streak extending to one or two inches in length.

These attacks gradually diminished in intensity, and she was progressing favorably when, on the 4th of April, 1890, she had a severe attack of pain in the face, followed by an eruption of vesicles situated on both upper eyelids, around both nostrils, and on

both sides of the lower lip. After this attack subsided she had no recurrence of any of the previous severe attacks, but during the next six months, after any occasion when she had any mental bother or worry, she would feel on both cheeks the same peculiar stinging pain, which would continue from five to nine hours and terminate with the eruption of one or two papules. These would either remain stationary for a day or two and disappear, or develop into vesicles. She reckoned there would be at least twelve such attacks, and they ceased exactly twelve months from the onset.

During the attacks of pain affecting the left hand, arm, and, in a less degree, the right also, she complained of the loss of power in her hand and arms, so much so that she felt unable to knit or sew. I could never satisfy myself of any distinct paresis.

Kola Nut of Africa.

Mr. P. L. Simmonds, in the *American Journal of Pharmacy*, December, 1890, gives the following interesting account of the kola nut, which is now attracting so much attention.

This seed or fruit, known under a variety of names in different parts of Africa, as kola, gourou, ombéné, nangoné, kokkorokon and matrassa, has only within a few years come into important notice as a food stimulant. Twenty or thirty years ago, it was incidentally described by Dr. Daniel and Prof. Attfield, in the *Pharmaceutical Journal*, but its extensive employment in Africa was comparatively little known. Although its use as a stimulant, in the place of coffee, tea, maté and coca by other people, had been very general, almost from time immemorial among the various tribes of Equatorial Africa, the product was little known in Europe.

The opening up of Central Africa and the increase of trade on the West Coast has demonstrated its importance as a local article of commerce, and its chemical advantages have become duly appreciated. There are, however, two distinct products; one, the true kola nut, the product of *Sterculia acuminata*, popularly known as the female kola, and the false, or bitter kola, designated as the male kola. The true kola tree grows spontaneously over the range of Western Africa comprised between the 10° of N. latitude to the 5° S. latitude. This tree, to which attention has of late years been prominently directed by the authorities of Kew, has been introduced from time to time into India, Ceylon, Seychelles, Mauritius and Cochin China in the East; Zanzibar and Sidney, and in French Guiana, British Guiana, Guadaloupe, Dominica and Jamaica in the Western Hemisphere.

Incidental mention of this nut has been already made in this Journal—1880, pp. 6 and 7; 1883, p. 27; 1884, p. 166, and 1886, p. 391. The tree commences to bear at 4 or 5 years, but it is not until 10 years that it is in full fruit, when it will produce on the average 120 pounds of seed twice yearly. Flowering in June, the pods will ripen in October and November, and a second crop will be yielded in May and June following, The fruits as they ripen have a yellowish-brown color, and, as the central suture opens, exposes both red and white seeds. The women remove the seeds, which are most appreciated and valued when they are fresh and moist. To preserve them, they are placed in baskets, in layers, with the leaves of *Sterculia cordifolia*, which are kept damp. If they are kept, or to be transported any distance, the nuts are washed and fresh moistened leaves added every month. The packages, weighing about 1 cwt., are sent to the Gambia, Gone and other districts. When the nuts become dry, they are reduced to powder, and taken in this state by the caravans to the interior. They frequently arrive, however, in a fresh state at Sokoto and Kouka, in the Soudan, and at Timbuctoo.

Not only are the kola nuts consumed in Africa, but they are also exported to Brazil for the use of the negroes there. The seeds of *Sterculia Chica* and *S. lasiantha* are also eaten in Brazil.

Sierra Leone is the principal market for these nuts. Ten years ago, about 750,000 pounds of kola nuts were imported there, and 600,000 pounds to the Gambia.

The unerring instinct of man, even in uncivilized countries, has led him to select, from the many thousands of plants presented to him in Nature, just four or five, which, from their alkaloid active principle, theine, seem to be a necessary rather than a luxury of life. These nuts contain more theine (viz., 2.34) than most of the other dietetic products in use. The properties of the nut are said to be two-fold. In the first place, it enhances to many palates the flavor of food eaten afterwards; secondly, it possesses the

more important function of staying the cravings of hunger, and enabling those indulging in it to endure prolonged labor without fatigue. Being bitter, they are used as a stomachic and a tonic.

It is beneficial in periodical and chronic headaches, in heart complaints and diarrhœa; and, mixed with cocoa, it has been found a sustaining and stimulating adjunct in exhaustive and wasting diseases. It is said to clarify beer and spirits, and, like the clearing nut (*Strychnos potatorum*), to render drinkable foul water. It is even spoken of as a cure for drunkenness, from the amount of theine it contains. Probably other species of kola or sterculia may furnish seeds equally used if they contain caffeine.

The false kola nut has been named *Garcinia Kola* by Dr. Heckel, but is not yet well defined, although it resembles the Eastern *Garcinia Morella*. These seeds are employed like the true kola nuts, although they have not the same properties, being destitute of the alkaloid. They are contained in a large berry, like an apple, to the number of three or four; oval, cuneiform. They are chewed generally on the West Coast, and have a bitter flavor, like green coffee. They are said to be an effectual remedy for cold in the head, a few seeds being chewed in the course of the day.

Contagious Diseases Act.

The effect of the Contagious Diseases Act in England has been a subject of much discussion at different times. The latest on the subject is in the *Lancet*, February 14, 1891, where it is stated that, for the purposes of comparing stations under the Acts with those not under them, fourteen of the latter were selected by Surgeon-General Lawson, in a recent paper, for comparison, and were called "fourteen stations never under the Acts." Besides these two sets of stations was a third, designated "all the stations never under the Acts." In 1860, at the fourteen stations which came under the Acts in 1864 and subsequently, the ratio of primary sores was 146; at the fourteen unsubjected stations 134, and at all the stations never under the Acts 131. From these points all fell, so that in 1862 they stood at 117, 103 and 99 respectively. In 1863 the admissions at the fourteen unsubjected stations rose to 117, while those at the fourteen subjected were 107, and all the unsubjected 108. The compulsory examination began to take effect in 1867, and though there was an increase of the incidence of the disease on the country as indicated by rises in the ratio of 17 per 1,000 in both the fourteen and whole unsubjected districts, that at the fourteen stations under the Acts was 4 per 1,000 only; and from this year the ratios at the fourteen subjected stations were always much under those in the whole until 1884, the last year of the comparison. In 1871 the incidence of the disease on the country seemed at its lowest, being 93 for the fourteen unsubjected stations, 81 for all the subjected and 51 only for the fourteen subjected. The stoppage of pay showed its effects in 1874 by a fall at each class of stations, which was continued in 1875, and still traceable up to 1877, after which the advance of another epidemic wave caused a rise at the fourteen unsubjected stations of 40 per 1,000, at all the unsubjected of 20, while at the fourteen subjected it was 4 only. In 1879 there was a slight reduction of the ratio at both classes of unsubjected stations, but a rise of about the same amount at the fourteen subjected; but in 1880, with the cessation of stoppage of pay, there was a general rise, amounting to 39 at the fourteen unsubjected stations, to 37 on the whole unsubjected and to 27 at the fourteen subjected stations; a portion of this was no doubt due to an increasing incidence of the disease over the country, but a large portion also to the removal of the inducement to conceal primary forms of the disease by stoppage of pay. The beneficial effects of the Acts will be seen by the following figures. In 1860 to 1863, when no Acts were in force, the ratio of primary sores at the stations subsequently protected by them was 129.8. In 1870 to 1873, the Acts being then enforced in all, it fell to 52.5. Secondary syphilis fell from 39.9 to 20.2; gonorrhœa from 134.6 to 100.3. At all the stations never under the Acts the fall in primary sores was from 116.3 to 86.0, in secondary disease from 30.5 to 27.4 and in gonorrhœa from 116.1 to 95. At the fourteen unsubjected stations primary sores fell from 120.6 to 107.9; secondary syphilis rose from 31.6 to 31.8; gonorrhœa fell from 112.1 to 71.6. In 1880 to 1882, stoppage of pay having terminated, the ratio of primary sores at the protected stations was 75.6, secondary syphilis 26.6, gonorrhœa 99.0. At all the stations never under the Acts the ratio of primary sores was 123.0; that of secondary

syphilis 32 5; gonorrhœa 110.4. At the fourteen unsubjected stations the ratio of primary disease was 175.9. of secondary syphilis 38 9 and of gonorrhœa 128.4.

The Acts were suspended in 1883, and wholly repealed subsequently; the separation of the tables has not been continued since 1884. The ratios of disease among all the troops are as follows:

	Primary Sores.	Secondary Syphilis.	Gonorrhœa.
In 1860, ratio per 1,000 of admission	140	36	133
In 1885, ratio per 1,000 of admi sion	127	27	121

From this it will be seen that the ratio of disease has returned to what it was in 1860 before the first Act was enforced.

There are many other interesting points in Inspector-General Lawson's paper which show immense pains, great research and a most thorough knowledge of the whole subject. Enough, the *Lancet* says, has been given to show the benefits of the Contagious Diseases Acts and the disastrous results of their repeal.

Cotton and Collodion Dressing for the Chest.

In the *Annals of Gynecology and Pediatics*, February. 1891, there is a letter from Dr. William Hunt, of Philadelphia, on a new method of dressing the chest in pneumonia, pleurisy, pleurodynia, etc. Dr. Hunt says:

This is the method I advise to dress the chest in a case of pneumonia, pleurisy and pleurodynia. Do it on a large scale, in the same way that we now dress abrasions and bruises. If there is to be any cupping or other preliminary operation, have that attended to; then all the ingredients wanting are pure collodion and absorbent cotton in smooth layers, and a good broad brush, like mucilage brushes. Apply a very thin layer over the side affected from spinal column to sternum, and secure it with collodion smeared thoroughly over it. Then go on with thicker layers, securing them with collodion until a good padding is obtained, paying particular attention to the edges. In double cases you can act accordingly. The advantages are:

1. The one dressing, if well applied, will last throughout the case, and so

2. The fatigue and discomfort of frequent poulticing are avoided.

3. The side, in single cases, is held as in a splint, while the free side does the breathing. A first-class non-conductor is covering the chest. I am not sure but that the contracting collodion may have some influence in controlling the blood supply.

4. There is no particular interference, in one who has a good ear, with physical examination. Maybe it would be a good thing if there was; for, having once made the diagnosis, what is the use of exhausting the patient every day by trying to find out whether one-eighth of an inch, more or less, is involved? The general symptoms will tell that.

Calomel and Salt.

The *Western Druggist*, February, 1891, says: Calomel and salt are by many believed to be incompatible on account of the alleged formation of mercuric chloride. This theory has often been contradicted, but Paul Adam has conducted a fresh series of experiments, the results of which he has recently reported. He boiled together calomel and salt in open and in closed vessels, in the presence of gastric juice, and the extract of beef. He also experimented with animals. His conclusions are: Boiled together in open vessels with the alkaline (especially ammonium) chlorides, calomel yields mercuric chloride. Under exclusion of the atmosphere, however, even in the presence of organic matter, no corrosive sublimate is formed. Hence there is no danger in the administration of these two agents together.

Study of Medicine in Thibet.

The *British Medical and Surgical Journal*, February 5, 1891, says: The Buddhist Lamas' University, in the Transbaikal Province of Thibet, has a medical course of ten years. According to *Nature*, a traveler named Ptitsyn has returned from that country with a collection of medical books and drugs illustrative of the knowledge and the methods of practice in Thibet. Mr. Ptitsyn remarks that he has found over one hundred diseases described in the Buddhist literature, aud of these a mythical origin is ascribed to only two. Strictly medical subjects are not studied until the fifth year of the course, the first four years being devoted to the study of the languages and theology. The eighth year is devoted to astrology, and philosophy is studied in the last two years.

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The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

PELVIC INFLAMMATION AND THE GENERAL PRACTITIONER.

The pathology of pelvic inflammation is settled beyond cavil. Non-puerperal pelvic inflammation is peritonitis, non-puerperal pelvic cellulitis does not exist, or exists only as a curiosity—resulting from traumatism and infection of the pelvic connective tissue. These statements are also nearly true of puerperal pelvic inflammation. Puerperal peritonitis is common; puerperal cellulitis is rare. It is also equally well known that pelvic peritonitis almost invariably means salpingitis with infection of the peritoneum by discharge of the tubal contents at the fimbriated end of the tube; and that recurring attacks of pelvic peritonitis are due to leaky tubes. Other causes of pelvic peritonitis are changes taking place in pelvic tumors, especially dermoid cysts, traumatism and perhaps the effect of exposure at the menstrual periods. These facts have been known for thirty years, having been discovered by Bernutz, and they have been demonstrated fully by the surgery of to-day.

It is also equally well known that chronic pelvic peritonitis does not tend to a natural cure, and that recurrences of acute peritonitis are characteristic of the disease, being due to leakage from the focus of poison, the diseased tubes. The natural end of such cases is invalidism or death during a recurrent acute peritonitis. Experience has shown that medical treatment, while affording much palliative benefit, is inadequate to effect a cure. Ablation of the diseased uterine appendage or appendages, the focus of the disease, is the only treatment offering a radical cure. When operation is done early, before the patient is a wreck, the immediate risk to life is slight, less than five per cent., and prompt restoration to health follows. Operations done on such diseased structures does not in any way lessen the fecundity of women; they are sterile by reason of the disease. It restores such sufferers to health and usefulness; saving some from invalidism and others from death. These facts are now amply demonstrated and are opposed only by those in the profession who object to everything which has not the stamp of antiquity upon it.

What, then, becomes the duty of the practitioner when called to attend these cases? To recommend operation by skilful hands. No more pressing duty devolves upon him, and it is time that the matter is brought home to the practitioner. He should know and feel that he is neglecting his duty when he puts such cases to bed, treats the acute attacks by opium internally and poultices externally; and between attacks paints the vagina with iodine and inserts the glycerin tampon. Such neglected cases are brought later to the surgeon either as broken-down wrecks, or as women dying with suppurative peritonitis. These are the "too late" cases. Either their nutrition is so profoundly depraved that they require months to recu-

perate, or being past recuperation they remain wrecks, or swell the death list of the surgeon who is too conscientious to refuse them a last chance. Hereafter the responsibility for such maltreatment will rest with the family physician.

The cases in which hesitancy may be felt are cases of slight or catarrhal salpingitis, in which the fimbriæ are not agglutinated, and in which accumulation of tubal secretions has not occurred. These cases are subjects for watchful care. Such of them as progress from bad to worse may be referred to the surgeon. The others are fair subjects for medical treatment, so long as life is threatened by attacks of peritonitis.

THE TONGUE IN SCARLET FEVER.

Authorities differ as to the constancy and diagnostic significance of the appearance of the tongue in scarlet fever. Upon the suggestion of Prof. Fürbringer, Dr. Neumann made a series of observations on the tongue in forty-eight cases of scarlet fever at the Friedrichshain Hospital, at Berlin, and records in the *Deutsches Archiv für Klinische Medicin*, January, 1891, the results of his investigation.

The changes in the tongue presented themselves in three stages. In the first, the mucous membrane became swollen, and the tongue was enlarged and corrugated on its surface, while the epithelium became cloudy. The tongue also presented the appearance of being heavily coated, except at the tip and margins. In the second stage, desquamation took place. This was most marked at the surface of the fungiform papillæ, and gave rise to the characteristic appearance of the strawberry tongue. In the last stage restoration of the epithelium took place, at times with such rapidity as to cause the tongue to again appear coated. Naturally, deviations from this typical course occurred. These could be explained by antecedent or complicating conditions.

The characteristic appearances of the tongue presented themselves in thirty-eight of the forty-eight cases, carefully inspected at intervals of two or three days—that is, in seventy-nine per cent. In six cases, no appreciable changes occurred. In five of these there had been digestive derangement or septic intoxication ; while in the remaining one no complicating condition could be discovered.

In the majority of the cases, desquamation took place from the third to the fifth day of the disease and left for more than four days longer the strawberry tongue which, in twelve cases, was still present on the fourteenth day. Thus in a third of the cases, the strawberry tongue disappeared during the first week ; in another third, during the second week ; while in the remaining third it was still present at the end of the second week. There was no relation observed between the intensity of the changes in the tongue and those in the skin.

From the foregoing, it may be concluded that the appearances of the tongue in scarlet fever constitute a characteristic, though not a constant feature of the disease.

EPILEPSY AND ALYLENE HYDRATE.

Notwithstanding the fact that many remedies have been from time to time brought forward for the treatment of epilepsy, the bromides yet remain the most trustworthy and most effective at our command. There are, however, certain cases in which the bromides absolutely fail to render any service, or in which for one reason or another they are not well borne. For these cases, it would be desirable to have a remedy that could at least be used to alternate with, if not as a substitute for, the bromides. Stimulated by the results recorded by Wildermuth, in the *Neurologisches Centralblatt*, No. 15, 1889, from the use of amylene hydrate in the treatment of epilepsy, especially when the attacks were frequent, Dr. Richard Drews, of Altona, determined to try the remedy in just such a case, and in the *Mün-*

chener medicinische Wochenschrift, January 27, 1891, he reports the disappointing and unfavorable results he obtained. The case was a typical one of epilepsy, in a woman thirty-five years old, without other neurotic history, in whom the attacks had begun at twenty years of age, and had continued with gradually increasing frequency. Bromides and chloral had been used without avail. Finally, resort was had to amylene hydrate, twenty-five grains three times a day. The attacks increased in frequency, one following each administration of the remedy, the appetite failed and there was severe headache and sleeplessness.

In view of this experience it seems as if amylene hydrate was of little use and that the bromides are yet the best remedy in the treatment of epilepsy. Perhaps too much disappointment should not be felt, and experimentation with amylene hydrate should not be wholly abandoned, because it may be suited to some cases, if not to others; but the experience of Drews certainly tends to dampen the ardor caused by Wildermuth's reports.

MEDICAL AND SURGICAL COLLEGE OF NEW JERSEY.

In the REPORTER for January 10, 1891, we called attention to resolutions in regard to the so-called Medical and Surgical College of New Jersey, adopted by the Hudson County Medical Society, and referred also to the exposure of the methods of this College made in the REPORTER as long ago as August 24, 1889. It is pleasant now to be able to report that—largely through the efforts of the State Board of Medical Examiners of New Jersey—the charter of the institution mentioned has been repealed by the Legislature, and the repealing act has been approved by Governor Abbett.

We heartily congratulate the New Jersey Board of Medical Examiners upon this fruit of its labors so soon after it came into existence. The institution just abolished was largely made up of electics, who, so far as we can tell, have somewhat different standards of professional and general excellence from those which prevail in the regular profession.

BOOK REVIEWS.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the REPORTER.]

DISEASES OF THE EYE. By EDWARD NETTLESHIP, F. R. C. S., Ophthalmic Surgeon to St. Thomas's Hospital, etc. Fourth American from the Fifth English Edition. 12mo, pp. 500. 164 illustrations. Philadelphia. Lea Brothers & Co.

This excellent manual, designed as an introduction to the study of eye-disease, seemed at its first appearance the most concise, direct and practical presentation of the subject to be found in the English language. Each edition has showed distinct improvement, and the present gives evidence that the revisions have been careful as well as numerous. Much that at first seemed merely implied and to be read between the lines, but only by one already familiar with the subject, is now clearly and explicitly stated; and, while brevity gives a dogmatic character to many of the opinions set forth, there is only gain to the learner in this. He is not left halting between two opinions; and he can accept, as well-grounded, every view of this careful, experienced and conservative author. A few errors have escaped elimination in the revision, and a few statements are open to criticism. Thus under "optical conditions of clear sight," p. 40, it is stated that an object must subtend an angle of 5 minutes, in order that its form may be perceived. This is true of square letters like Snellen's, as stated on p. 48; but does not hold for simpler forms. Objects and spaces of 1 minute ought to be distinguished in good in-door light. In the designation of prisms the numbering by the actual deviation produced seems to be ascribed to Maddox, instead of to Jackson; and no mention is made of the metric designations of Dennett and Prentice, which complete the reform which ought to be made. The "pseudo-coloboma" of the iris may be upward or in any direction; so the statement is incomplete that coloboma "is always downwards." The table of prismatic effect of decentering lenses quoted from Maddox, notes on spring catarrh, pemphigus of the conjunctiva, corneal transplantation, etc., bring the work up to date; and by the substitution of new cuts and in its general typography this edition seems an improvement on the last. On the whole, this book may be said to fully deserve the warm welcome which it has already received, and to be worthy of hearty recommendation to the profession.

ÉTUDES SUR LA RAGE, ET LA METHODE PASTEUR. Par le Dr. LUTAUD, Rédacteur en Chef du *Journal de Médicine de Paris*. 2d Edition. 12mo, pp. x, 440. Paris. *Journal de Médicine de Paris*, 1891.

This second edition of Dr. Lutaud's book on hydrophobia comes at an interesting time, when he finds himself engaged in combating the extravagances of the claims of Koch's followers. The extremes to which Pasteur and his disciples have pushed his notions in regard to the so-called protective inoculations against rabies, have found a curious counterpart beyond the Rhine, and as Pasteur's claims found little

recognition there, so in turn have the claims of Koch been coldly received in France. It may be yet that Lutaud will devote himself to collating the failures and fallacies of the Koch method, as in the book before us he collates the failures and fallacies of Pasteur's method. One who reads this book will see in it, however, intimations of something worse than failure and fallacy—that Pasteur has been guilty of misrepresentation, and has made the discoveries which were exploited as humane and scientific, the means of acquiring wealth as well as universal fame. It will be seen here, likewise, that nothing, against which Pasteur has proposed a sure preventive, has been prevented, and that the diseases of the vines, the diseases of the silk-worms, the diseases of the dogs, the diseases of cattle still ravage France and other lands formerly exposed to them; and he who looks for success in connection with Pasteur's brilliant claims will find them principally in the fortune which he has amassed and the reputation which he has secured. In this there is no claim that Pasteur has not been industrious and ingenious, and from the scientific standpoint a very useful investigator; but it appears that whenever he has passed from the field of the investigator and has attempted to make any practical application of his theories, the result has been more brilliant than lasting, and is likely to serve rather as a warning than as an example.

SUGGESTIONS TO THE MEDICAL WITNESS. By J. S. Wight, M. D., Professor of Operative and Clinical Surgery at the Long Island College Hospital, Brooklyn, N. Y. 12mo, pp. 228. Cambridge: Printed at the Riverside Press. 1891.

Dr. Wight has written a very readable book on a very important subject. It is so common now for medical men to be summoned as expert witnesses that it is as important for them to be as well prepared for the trying duties of the situation as possible. Unfortunately many medical witnesses go on the stand without any previous experience, and with no better preparation than a desire to do justice and bear true witness. While this is the most important prerequisite, of course, for good testimony, it is, nevertheless, a fact that the position is often trying because of its mere novelty, and more often trying because of the harrassment of the witness by the attorneys. To be forewarned in regard to the difficulties of the situation would be, in many cases, to be forearmed; and the recorded experience and opinions of a man like Prof. Wight cannot fail to be helpful.

Literary Notes.

—P. Blackiston, Son & Co. announce for early publication, "*A Handbook of Local Therapeutics*," being a practical description of all those agents used in the local treatment of disease, such as Ointments, Plasters, Powders, Lotions, Inhalations, Suppositories, Bougies, Tampons, etc., and the proper methods of preparing and applying them.

The diseases which chiefly require local treatment are those of the Respiratory Passages, Ear, Eye, Skin, together with certain general surgical affections, including the Diseases of Women. In order, therefore, that the various uses of each remedy may be thoroughly set forth the following gentlemen have assumed the authorship: Harrison Allen, M. D., Emeritus Professor of Physiology in the University of Penna.; Laryngologist to the Rush Hospital for Consumption; late Surgeon to the Philadelphia and St. Joseph's Hospitals. George C. Harlan, M. D., late Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine; Surgeon to the Will's Eye Hospital, and Eye and Ear Department of the Pennsylvania Hospital. Charles B. Penrose, M. D., Surgeon to the German Hospital; Instructor in Clinical Surgery, University of Pennsylvania, and Arthur Van Harlingen, M. D., Professor of Diseases of the Skin in the Philadelphia Polyclinic and College for Graduates in Medicine; late Clinical Lecturer on Dermatology in Jefferson Medical College; Dermatologist to the Howard Hospital.

Each remedy will be taken up in alphabetical order, and after a succinct description of their pharmaceutical properties, by Dr. George I. McKelway, will be considered with reference to the local treatment of the affections above outlined. The authors believe that the information contained in this work will not be found elsewhere. The activity in the various lines of special medicine is one of the most striking phases of the times, and has materially changed many of the older methods of treating disease by local means. The greater part of the literature which has appeared is not accessible to most physicians. The *Handbook*, it is believed, will be of value to general practitioners as well as to those who, like themselves, are especially interested in sub-divisions of the clinical field.

The work will form a compact volume of about 400 pages, arranged in a manner to facilitate reference and containing, besides the usual index, a complete index of diseases, that will greatly enhance its usefulness.

—A few months ago the *Home-Maker* underwent changes which improved its appearance and intrinsic value very materially. The number for March, 1891, is a very good specimen of the American monthly magazine. It is well printed on handsome paper, and fully illustrated, largely by means of process pictures. It contains articles of great interest, among which may be mentioned, "Sheep in California," the "Study of American Republics" and one on the "Burrows of the Prairie Dog." This magazine is edited by the well-known writer, "Jennie June," and contains considerable matter especially interesting to women. The subscription price, $2.00, is so moderate that it ought to have a large circulation.

Notes and Comments.

American Academy of Medicine.

The Sixteenth Annual Meeting of the American Academy of Medicine will be held at Washington, D. C., May 2–4, opening at 3 P. M., May 2.

As it is just previous to the Sessions of the American Medical Association, members will be able to attend both meetings.

Hiccough Cured with Nitrate of Amyl.

Last February a young woman of Shelton, Connecticut, had a prolonged attack of hiccough which seriously imperilled her life, despite the physician's efforts. In conse-

quence of the circulation given the case in the newspapers, remedies were sent from all parts of the country. Many were tried, and that suggested by Frank W. Mack, of the Associated Press, New York, was effective. The remedy was nitrite of amyl, a few drops to be inhaled from a handkerchief. On February 10, it was announced that the young woman was out of danger.

Simple Treatment of Ingrown Toenail.

The *Pittsburgh Medical Review*, February, 1891, cites Dr. Puerckhauer (from the *Münchener med. Wochenshrift*) as recommending a simple, and at the same time competent treatment for ingrown toe-nail.

A forty per cent. solution of potassa is applied warm to the portion of the nail to be removed. After a few seconds the uppermost layer of the nail will be so soft that it can be scraped off with a piece of sharp-edged glass; the next layer is then moistened with the same solution, and scraped off; this must be repeated until the remaining portion is as a thin sheet of paper, when it is seized with a pincette and lifted from the underlying soft parts and severed from the other half. The operation does not require more than half an hour's time, is painless and bloodless, while the patient is delivered from his suffering without being disabled even for an hour.

Dietetic Employment of Fat.

W. Zuntz has a paper on the dietetic employment of fat in the *Therapeutische Monatshefte*, October, 1890. He was induced to put to the experimental test of some conditions of digestion of fat, a preparation of chocolate suggested by von Mering. The chocolate is so made that it possesses a sufficient quantity of free fatty acids to form a permanent emulsion, without in any way injuring the taste of the chocolate. In order to find out whether the digestibility of fat is enhanced by the power to form an emulsion, Zuntz sought to find out what quantity of cacao butter, with and without the addition of fatty acids, was appropriated when administered to dogs. The result was, that there was an increase in digestibility, which was only slight—two per thousand of the fat—if moderate quantities of cacao butter were cooked with the rest of the food, but it was considerable if (as is usually the case with cod-liver oil, in order to avoid stomach digestion) the cacao butter was given some time before the rest of the food and in somewhat greater quantities. In the latter case, there appeared in the stool 9.9 per cent. of pure cacao butter, and only 6.1 per cent. of the emulsionized.

Corresponding to the result of the emulsionizable cacao butter in dogs, the fat of Mering's chocolate proved to be very digestible in men. For three days a moderate diet poor in fat, consisting of bread and lean meat, was given, and, in addition, a daily quantity of 416 grams of chocolate containing 87 grams of fat. In the feces appeared only 4.88 per cent. of fat; whereas Weigmann, in a series of experiments with ordinary cacao butter, administering 53 grams, recovered 5.5 per cent. In comparison with the most used fats, and those fats prized on account of their being easily digestible, such as butter, lard, marrow, the fat of the chocolate preparation is seen to be considerably superior.—*Deutsche med. Wochenschrift*, Jan. 1, 1891.

Treatment of Stricture of the Ileo-cæcal Valve.

In the *Bulletin Médical*, December 31, 1890, Prof. Péan has a lecture on the treatment of strictures of the ileo-cæcal valve, in which we are glad to see that he is acquainted with Philadelphia work in this field, Barton's cases being referred to in some detail. Péan's operation consists in exposing by an incision the ileum at its junction with the cæcum, and occluding the bowel both above and below the valve with rubber tubes fastened with forceps. The tubes serve the double purpose of preventing hemorrhage and keeping fecal matter from circulating in the intermediate portion of bowel during the operation. The intestinal wall is then incised longitudinally over the valve for a distance of three and one-fourth inches. After washing the interior of the bowel with a one per cent. solution of carbolic acid, the condition of the valve is examined. If it is found transformed into fibrous tissue, and so retracted as to occlude the bowel, it is resected down to the muscular coat of the bowel. This done, the two extremities of the intestinal wound are brought together in such a way that the ileum and cæcum

are brought together. The opening in the bowel thus becomes lozenge-shaped instead of longitudinal, the two upper sides being formed by the ileum and the two lower by the cæcum; the sides are then approximated with the forceps, and are united so that the line of suture is transverse to the bowel. Péan thinks this method of operating possesses a number of advantages, especially as it establishes an ampullar dilatation at a point where before there was stricture.

Jefferson College's New Surgeon.

At a meeting of the faculty of Jefferson Medical College on March 9, Dr. H. Augustus Wilson was elected Lecturer on Orthopedics in the Jefferson Medical College and surgeon in charge of the Orthopedic Department of Jefferson Medical College Hospital, to succeed Dr. O. H. Allis, resigned. Dr. Wilson is Professor of General and Orthopedic Surgery in the Philadelphia Polyclinic and College for Graduates in Medicine, Lecturer on Orthopedic Surgery in the Woman's Medical College. The present success of the Polyclinic is due largely to his industry and enterprise, and his present appointment is probably a tribute to these same qualities.

The Law of Periodical Function in Women.

Probably no single function of the human organism has called forth so many hypotheses as the menstrual loss of blood, occurring in healthy women at regular intervals. Though many ingenious explanations have been proposed, none is entirely satisfactory. In the *Wiener medizinische Presse*, February 8, 1891, v. Ott reports observations, not exclusively upon menstruation, but upon the various vital processes occurring in women during the period of generative activity. These processes correspond in time to the hemorrhage, are associated conditions, with a dependent relation to it. Observations upon temperature, pulse and blood pressure indicated that vital activity attained its maximum preceding the menstrual period and declined at its commencement or immediately before. Sphygmographic tracings, muscle strength, and excretion of urea suffer similar variations. Observations were made at a certain hour each morning during prolonged periods, sometimes extending into the menstrual periods, upon heat radiation, muscle strength, pulmonary capacity, inspiratory and expiratory force, the tendon reflexes, in healthy women placed under the same condition; and a physiological functional periodicity of the female organism was demonstrated. To establish the connection between menstruation and this periodicity of function, it is necessary to determine if the rhythmical variations are independent of menstruation. A large number of observations made by Dr. Schichareff, under the guidance of von Ott, upon pulse, temperature and blood pressure, in girls between the ages of eight and thirteen years, and in women between the ages of fifty-eight and eighty years, showed that no such periodical variations of physiological functions occur in females during the periods in which they are not capable of conceiving, and in which they do not menstruate.

Teeth in Diabetes.

The importance of early diagnosis in diabetes cannot be over-estimated, because the prognosis may be much influenced by the institution of early treatment. It is interesting, therefore, to call attention to the fact that the *Wiener medizinische Presse*, January 4, 1891, contains a brief abstract of a publication by Magitot in *Bulletin médical*, in which he dwells upon the diagnostic significance of alveolar osteo-periostitis as a manifestation of diabetes. He has noticed, in this disease, a deviation of the tooth, which, later, becomes loosened. At the same time an alveolar catarrh exists. Ultimately the tooth falls out. In the further course of the disease, the alveolar border of the bone may be absorbed, and this in turn may be followed by gangrene of the gum.

Druggist's Error in Germany.

The *Chemist and Druggist*, January 31, 1891, says: A singular case in connection with a mistake in dispensing is now occupying the attention of the Berlin authorities. Some time ago a prescription was presented to the assistant at a Spandau pharmacy ordering a draught composed of sodii nitrat., potas. bromid., aq. dest., and syr. mannæ, for a child. The assistant by mistake dispensed spirit of camphor instead of the distilled water, but the error was discovered after the administration of the first dose to

the patient, and no ill results followed. But the father thought he would try to make some capital out of the mistake, and threatened the pharmacist with exposure, demanding first 3,000 marks as hush money, and, when that was refused, dropping his price for secrecy to 140 marks. But the chemist declined to compromise, and the father wrote about the mistake to the local press. The police got wind of the affair, and they are now killing two birds with one stone. The chemist's assistant was prosecuted for causing bodily injury through carelessness, and fined 50 marks, and the would-be blackmailer is being dealt with for the more serious offense of trying to commit illegal extortion by threats.

Congress of American Physicians and Surgeons.

Congress of American physicians and surgeons will hold its second triennial meeting in Washington, D. C., September 23–25, 1891, under the presidency of Dr. S. Weir Mitchell, of Philadelphia. The vice-presidents, *ex-officio*, are: The president of the American Surgical Association, Dr. Claudius H. Mastin, of Mobile, Ala.; the president of the American Ophthalmological Society, Dr. Hasket Derby, of Boston; the president of the American Otological Society, Dr. Gorham Bacon, of New York; the president of the American Neurological Association, Dr. Wharton Sinkler, of Philadelphia; the president of the American Gynæcological Society, Dr. A. Reeves Jackson, of Chicago; the president of the American Dermatological Association, Dr. Francis B. Greenough, of Boston; the president of the American Laryngological Association, Dr. William C. Glasgow, of St. Louis; the president of the American Climatological Association, Dr. Frederick I. Knight, of Boston; the president of the Association of American physicians, Dr. William Pepper, of Philadelphia; the president of the American Association of Andrology and Syphilology, Dr. Fessenden N. Otis, of New York; the president of the American Orthopædic Associatian, Dr. Newton M. Shaffer, of New York; and the president of the American Physiological Society, Dr. Henry P. Bowditch, of Boston. The chairman of the Executive Committee is Dr. William Pepper, of Philadelphia. The treasurer is Dr. John S. Billings, of the army. The secretary is Dr. William H. Carmalt, of New Haven. The subjects for report and discussion mentioned in the preliminary programme are as follows.

Tuesday, September 22, 3 P. M.—Conditions underlying the Infection of Wounds, including a discussion of Disinfection with Reference to the Treatment of Wounds, of the Relation of Bacteria to Suppuration, of the Resistance of Tissues to the Multiplication of Bacteria, and of the Effects of Antiseptic Agents on Wounds. Referee, Dr. William H. Welch, of Baltimore; co-referee, Dr. Roswell Park, of Buffalo. The discussion will be adjourned if necessary until Friday afternoon.

Wednesday, September 23, 3 P. M.—The Late Manifestations of Syphilis. Referee, Dr. Phineas S. Conner, of Cincinnati; co-referee, Dr. Abner Post, of Boston.

Wednesday evening.—The president's address, to be followed by a reception.

Thursday, September 24, 3 P. M.—Fibroid Processes (Chronic Interstitial Inflammation, Scleroses); their Pathology and Ætiology, with Special Reference to the Influence of Diathesis and Heredity. Referee, Dr. Alfred L. Loomis, of New York; co-referee, Dr. William Osler, of Baltimore.

Friday, September 25, 3 P. M.—If necessary, the discussion on The Conditions underlying the Infection of Wounds, etc., will be resumed.

Is Sterility a Disease?

The Medical Press, February 25, 1891, says: A civil record has recently been tried in Dublin before Mr. Justice Holmes and a jury in which an enunciation of the law was made by the judge which is of much importance to the profession, and which raises very interesting considerations. The suit was instituted by a Dublin physician to recover fees to the amount of 19 guineas for attendance upon the wife of a solicitor. The lady, it appeared, suffered from no other disease save sterility, but anxiously desired a cure for this condition and sought advice with this object, whether with or without the knowledge and consent of her husband was not clearly proved. The physician attended and made many examinations by speculum and sundry applications of sponge tents and other instruments for the purpose of dilating the cervix uteri. The lady's husband refused to pay on the ground that the treatment of his wife for the

cure of sterility was not a "necessary" for which the law required him to pay, and on the additional ground that the physician's attendance took place without his knowledge or consent, but this latter plea may be taken as formal. The law laid down by Mr. Justice Holmes in his charge to the jury, which we regret to say has not been reported in the newspapers, is as follows: 1. Every man is bound to provide necessary medical care for his wife in case of sickness. 2. Every husband is liable for payment of fees in case of such sickness, whether he knows of the attendance on his wife or not; but, 3, Sterility is not a sickness for the treatment of which a husband can be made liable. It does not shorten life, nor prevent the carrying out of household duties, nor cause physical pain. Therefore medical attendance for the remedy of such condition is not a "necessary" within the meaning of the law, and the physician, in this suit, was unable to recover the fees due to him. It should be added, however, that he could still recover against the separate estate of the wife, if she had any, for "work and labor done" though the "work and labor" might not be legally "necessary," as against the husband. This decision raises a distinction between a sickness and an abnormal condition which we have not seen previously defined in a court of law, and it is interesting to consider how far the definition extends. For instance is a nævus, or a wart on the back, such a condition as the law would consider to require "necessary" attendance? None of these shorten life, none of them prevent the carrying out of domestic duties, and none of them cause physical pain, and yet they have always been considered as subjects for medical and surgical treatment, but, if the dictum of the learned judge in this case is to be trusted, of which we have no doubt, practitioners will find it necessary, in future, to secure themselves in such cases, by a definite contract with the husband before they enter upon attendance of the wife.

Infusion of Roses for Diarrhœa.

Dr. A. V. Alexeevski (*Bolnitchnaia Gazeta Botkina*, December, 1890) says that preparations of rose petals have usually been used only as vehicles, but never as an independent medicament. He found the infusion of flores rosarum an excellent therapeutic agent, especially in diarrhœa. Only chronic cases were chosen, which did not yield to any ordinary treatment known for diarrhœa. The infusion was prepared by putting a handful of the dried leaves in a glassful of hot water and keeping the mixture covered in a warm place for about two hours. To adults from two to three glassfuls of the infusion were given; to children a glassful in divided doses during the day. The best results were obtained from flores rosæ rubiæ; the infusion of flores rosæ centifoliæ was found weaker in its action. It is better not to add any sugar to the infusion as it only gives the infusion an unpleasant taste.

Three chronic cases are stated to have been permanently benefited by the above treatment. One patient was a middle-aged woman, and two were children of three and a half and two years old respectively.

The beneficial action of the infusion is due, first, to the presence of tannin, and second to the volatile oils, oleum rosarum being one of them. The latter possesses antiputrifactive and anti-fermentative properties. The preparation of the red rose is recommended to be used for children.

Primary Pyemia.

Primary pyemia, *i. e.*, pyemia without any apparent focus for the primary supply of infectious matter to the general system, is very rare. Dr. L. P. Alesandroff, in the *Bolnitchnaia Gazeta Botkina*, October 17 and 24, 1890, relates the history of an interesting case of this form of pyemia in a young boy who was under his charge.

The boy was ten years old, with a negative family and personal history. December 2, 1890, he fell on the floor and hit his knee slightly. It did not give him any pain, even immediately after the fall. December 4, he began to complain of slight pain in his knee and general malaise. He had no special treatment until December 6, when high fever was discovered, after which he was sent to the hospital. On admission the child was found in a condition of septicemia. The leg and foot on the side of the injury presented all the signs of acute infectious osteomyelitis, for which Alesandroff immediately performed an operation. On the following day the patient was very restless, began to fail rapidly, and died in the night.

The *post-mortem* examination disclosed old

pleuritic adhesions, hemorrhagic faci in the lungs and in the cardiac pericardium, changed in some places into pus, purulent arthritis, limited osteo-myelitis and purulent cellulitis in the leg. All the appearances were those of acute and recent disease, and it appeared impossible to regard any of the pathological points as the original source through which systemic infection had taken place.

Alesandroff says that the general septic condition developed entirely independently of the slight injury received to the joint. He supposes that, in this case, a number of germs found their way into the system, and having met with little or no resistance of the tissues caused the general blood poisoning. Falls and injuries in children are an every-day occurrence, and he thinks that, in similar cases, it is not justifiable to look upon a slight fall or injury as being the cause of acute septicemia. He refers to a similar case reported by Prof. Kohts, in the *Deutsche Medicinische Wochensch.*, 1887.

Another such case is reported by Dr. R. R. Ball, in the *New York Medical Journal*, February 14, 1891, under the heading "Case of fatal septicemia following contused injury to the thumb in a strumous subject."

An Appliance to Facilitate the Insertion of the Soft-Rubber (Nelaton's) Stomach-Tube.

Dr. Gustave Liebmann, Attending Physician to Patients with Stomach Diseases, North End Dispensary, Boston, says, in the *Boston Medical and Surgical Journal*, March 5, 1891: In the every-day use of a stomach-tube the soft elastic (Nelaton's) tube is by general agreement the one to be preferred. Although the hard gum tubes enter the pharynx and œsophagus much more readily, they are at any rate relegated to the rarer cases of poisoning with suicidal intent, where, from obvious reasons, the application of a soft tube is not feasible. In all applications of a tube for diagnostic or therapeutic purposes we use the soft kind, as it is well-nigh impossible to do any mischief with them, and they "sit" much easier in the stomach, giving rise to less irritation or gagging than a hard tube. Still the introduction of a soft tube is at times, although generally not difficult, a source of great annoyance to both physician and patient. And why? Because for the passage of the instrument from the fauces to the beginning of the œsophagus we have to depend on the intelligence and docility of the patient. He has to swallow the tube and work it through the pharynx, and only then are we enabled to push it down to the cardiac orifice. Should the patient from some cause (awkwardness, nervousness, and so on), fail to swallow, as it happens in some exceptional cases, then we are helpless and have to give up the job. Now to overcome this difficulty I have during the last three months used a simple appliance, that served me exceedingly well.

Although I designed the stylet and had it made to suit my fancy, I must state that the conception of it I got from a lady patient, returning from Professor Leube, in Wurtzburg, who told me that the doctor used some sort of a staff to steady the tube. The stylet is made of rattan, is about thirty-four inches in length, to fit that of the ordinary Nelaton, and to project besides one and a half to two inches at the proximal end, is well smoothed down, of the thickness of a No. 6–8 English catheter (according to the caliber of the tube), with one end curved like the beak of a metallic bougie, but of uniform thickness from one end to the other.

The curved end of the well-lubricated stylet is inserted and pushed forward through the tube, until it arrives at the distal end of the latter, care being taken that no part of it protrudes through any one of the openings at the end of the tube. It is advisable to bend tube and stylet still more into the requisite curve before inserting in the fauces. This done, the tube, with the stylet sticking out at the proximal end, is cautiously inserted—like any other hard-gum tube—into the fauces and pushed forward along the pharynx to a point corresponding with the lower border of the cricoid cartilage, or in other words, to the beginning of the œsophagus, when the stylet is withdrawn, and the tube slid down to the cardiac orifice without any further trouble. You see the soft tube is changed into a stiff one but for the short minute during which it has to pass the pharynx; we remove the stylet, and have to deal with a soft tube during the remainder of the whole procedure.

I would warn against allowing the stylet to remain within the tube below the mentioned limit, as, in the first place, we don't want to use a hard tube in the œsophagus, and second, the withdrawal of the stylet under this condition would be almost impossible. At any rate, our end in view—

the overcoming of the difficuly to the passage of the Nelaton tube—is fully reached by using the stylet only as far as the pharynx extends.

I would claim, therefore, that the stylet fulfils all the requirements of the case, dispenses with the co-operation of the patient, and that there should never be any further failure, the patient being willing and there being no organic stricture present, in introducing a soft-rubber tube into the stomach.

Fractured Ribs in the Insane.

A paper of much interest upon the subject of fractured ribs of the insane has been contributed to the last volume of the *St. Bartholomew's Hospital Reports*, by Dr. Claye Shaw. It discusses in the first place how it is that fractures occur. The author states that the detection of broken ribs in lunatics is not necessarily proof of violence on the part of an attendant, because it is difficult to imagine that attendants who know so well the consequences of being detected in any act of violence would deliberately, and for no reason, commit one so easily found out. Seemingly, it is right to say that fractures in the ribs of lunatics are not caused by hard direct blows, but by a slighter force which happens to take the patient when his body is placed at a disadvantage for resisting strain. Hence the absence of a bruise and the difficulty in finding out how these injuries occur. Dr. Shaw bases this opinion upon the fact that prize-fighters rarely receive any injuries to the ribs, although immense blows may be given upon the thorax, the explanation being that the body is in a position to resist the effect of the blow. After many experiments made by himself and Mr. Stansfield, Dr. Shaw ascertained that the breaking weight of a rib—the eighth—was among males, on the right side 15 11-16th lbs., and on the left 16¼ lbs.; among women it was 10⅛ lbs. on the right side, and 9½ lbs. on the left. He summarizes his results as follows: (1) That a considerable difference is found to exist not only in the weight of the ribs on the two sides of the body, but also in the average breaking weight. (2) That the lighter rib is often found to bear the heavier weight, and that there is no proportion between the weight of the rib and the number of pounds it is capable of sustaining, whence it would appear that physical conditions of structure have more to do with the strain-resisting power than has chemical change in bones. (3) That persons suffering from disease of the heart or blood-vessels bear less strain than others. (4) That persons suffering from advanced constitutional disease, such as phthisis, may have ribs that support a strain much above the average, and hence that there is no direct relation between constitutional strength and that of the ribs. (5) That when a blow causes a fracture this is dependent not so much on the weight of the rib and its power of bearing strain as on other conditions. Lastly, he remarks that the dictum that the ribs of the insane are more brittle than those of the sane is true to a very limited extent only, and is almost confined to those affected with degeneration of the circulatory system. He appends a table to his paper showing the weight required to cause fracture of the rib and the seat of the fracture in forty-five experiments which he made.—*Medical Press*, February 25, 1891.

Acetanilid for Chancre and Chancroid.

The *Journal de Médecine*, January 25, 1891, states that Basilevitch reports in *Nouveaux Remèdes*, November, 1890, that cicatrization took place in a short time as a result of sprinkling acetanilid on the surface of the ulcers in one case of chancre in a woman and in two cases of chancroid in men.

In these cases, acetanilid has the advantage over iodoform of being inodorous, and that large doses do not give rise to toxic manifestations. It is also less expensive than iodoform—an important consideration, especially in dispensary practice.

Foreign Medical Diplomas in Illinois.

The Illinois State Board of Health has decided that hereafter it will recognize no foreign diploma unless such diploma confer the right to practice medicine in the country in which it was granted. This rule applies to Austrian, German, Russian and Swiss diplomas, unless the holders have passed the State examination which entitles them to practice in those countries. It applies also to Canadian diplomas unless the holder be a licentiate of the Colleges of Phyicians and Surgeons, of Ontario and Quebec.

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Clinical Lecture.

GALVANISM IN THE TREATMENT OF DISEASES OF THE UTERUS.[1]

BY JOHN M. FISHER, M. D.

With a view to determine the value of galvanism in the treatment of pelvic disease in women, Professor Parvin, one year ago, gave me a place on the "gynecological clinic" for the purpose of treating such cases as I might think proper with the battery. In spite of serious drawbacks that attended our earlier work, and of a skepticism which dominated our minds at the outset, as to its possible value, we must confess to having verified at least some of the reported successes of more competent observers, in evidence of which we have here living witnesses—many of the patients themselves, who have undergone treatment by this means—to testify to its efficacy.

After giving the salient features in the history of each case, it may be well for you to note the number and time of the sittings, the pole that was placed in the vagina or uterus, the intensities as expressed in milliampères, and the results. A demonstration of the galvanic apparatus, with an explanation of its mode of action, and the treatment of a case in your presence, will occupy our attention at a subsequent lecture.

Case 1. Mrs. G——, æt. 21, married. I removed this woman's uterine appendages fifteen months ago for the cure of a septic salpingitis following a miscarriage. She made a good recovery. Soon afterwards, however, she began to have profuse uterine hemorrhages, recurring at irregular intervals, and continuing from one to three weeks. Every medical resource known to me was tried and failed. On May 13, 1890, after she had bled for more than three weeks, a positive intra-uterine application of galvanism was made, 60 milliampères for five minutes, with the result of arresting the bleeding within twelve hours. Since then she has had a mere "show" but once, extending over a period of two days. She is now in the enjoyment of excellent health.

Case 2. November 18, 1889, I was called to see Mrs. S——, who gave the following history: age forty-two, married, one child nineteen years old, no miscarriages. Six years ago she began to suffer with menorrhagia. She continued to grow worse with time, until within the last two years, she seldom knew of a day that she was "well," the hemorrhage having become almost constant, and at times so excessive that she was frequently obliged to resort to the use of tampons, and to take to her bed for weeks in succession. She stated that she was confined to bed almost half the days of the year, because of this trouble. At the time I was first summoned she had been in bed for more than nine weeks, flooding incessantly, save when this was temporarily arrested with tampons. Her weakened pulse, sunken eyes, blanched face and bloodless appearance of the local and vaginal mucous membranes, at once told the story; and, although she had been under the care of intelligent practitioners, men of large therapeutical resources, the bleeding during all of these nine weeks had not been checked for even a single day. After the removal of a cotton tampon, and the vagina being cleared of clots, blood was seen issuing from the uterine canal. The uterus was found to be enlarged, of a globular form, and freely movable. The anterior lip appeared to be the seat of a small intramural fibroid. The uterine cavity measured four inches. Fibroid uterus was diagnosticated. An intra-uterine positive galvano-chemical caustic application of fifty milliampères of five minutes' duration was made;

[1] Delivered at the Jefferson Medical College Hospital, December 9, 1890.

with the result of arresting the hemorrhage at once. Four days later a second application was made, of seventy milliampères, for five minutes. Six days more elapsed and I found the patient sitting up with no hemorrhage. A third application was made, positive, intra-uterine, seventy-five milliampères, five minutes. November 30, slight bleeding recurred and continued for six days. The patient was about all the while, attending to household duties. December 9, positive cauterization, one hundred milliampères, five minutes. This was the fourth and last galvanic treatment until the following May, when five months had elapsed, during which she menstruated regularly, the "flow" extending over periods of four and five days; no clots, no pain. At this time—May 2, 1890—she was again seized with hemorrhages. I was out of the city, and the bleeding continued three weeks. On my return I found the patient in bed, blanched from loss of blood. I made a single positive application of galvanism, 100 milliampères, five minutes, with the result of checking the bleeding within six hours. Six months have elapsed since then, and the patient is in buoyant health and menstruation has been regular, lasting three and four days. A bimanual examination indicates that the uterus has been considerably reduced in size.

Case 3. Lizzie B——, æt. 27, single, has suffered with menorrhagia for four years. Lately the flow has covered periods of three weeks and more, with intervals of only seven and eight days. She suffers with frequent attacks of frontal headache and vertigo, and is extremely nervous and apprehensive. The mucous membranes in general present a blanched appearance. Within the past few years she has lost considerably in weight. Uterus retroflexed but movable, posterior wall the seat of a fibroid the size of a small lemon. June 20, 1890, the patient states that she has been bleeding continuously for three weeks. An application of galvanism, negative, intra-uterine, 40 milliampères, five minutes, was made. Three days later, still bleeding; another negative application, 60 milliampères, five minutes. Four days more elapsed, and she came to the clinic paler and weaker than at any time before, stating that since the previous treatment she had been confined to bed because of the excessive flooding. Blood was still issuing from the uterus quite profusely. A "positive" application, fifty milliampères, five minutes, was now made, with the result of arresting the bleeding within twenty-four hours—after it had persisted for more than four weeks.

Between June 27 and September 1, twelve intra-uterine positive applications of galvanism were made, with intensities of from fifty to one hundred milliampères, five minutes. After the last treatment the patient was taken with colicky pains in the abdomen, attended with nausea, loss of appetite and violent frontal headache, confining her to bed for a week. The last application no doubt excited a certain degree of pelvic inflammation.

This is the only case of all I have had under treatment in which such an unfortunate complication resulted. The patient has no symptoms at present that indicate permanent disability as a result of the attack. She has menstruated regularly since July, the flow covering periods of eight and nine days, and being profuse but not painful. The size of the fibroid has remained stationary. She has gained ten pounds in weight, and the signs of blood deterioration are no longer present.

Case 4. Mrs. R——, æt. 38, married for nineteen years, no children. The patient, on presenting herself at the clinic, had a large, smoothly-rounded fibroid tumor of the uterus extending to within an inch of the ensiform cartilage. She suffered from constant backache, vesical tenesmus, rectal distress, and a feeling of fulness, tension, and dull pains throughout the pelvis, shooting into the thighs—the latter symptom being especially annoying. From November 1, 1889, to November 26, 1890, twenty-nine negative intra-uterine applications of galvanism were made; the intensities varying between 100 and 150 milliampères, five minutes. To-day we have a report to make as follows: She menstruates regularly without pain, the periods covering from three to five days, flow not excessive. The sensations of fulness and tension are very decidedly relieved. The vesical tenesmus, rectal distress and abdominal pains and the pains in her limbs, have all disappeared. One year ago her girth measurement at the umbilicus was thirty-four inches, at present it is thirty inches; and, since this difference obtains with reference to all the measurements taken, I am sure you will not consider it extravagant when I say that this tumor has decreased in size to the extent of at least one-fourth its original bulk one year ago.

Case 5. Mrs. N——, æt. 24, married eight years, four children, one miscarriage nine

months ago after six weeks' gestation, to which she attributes her present ailments. Ever since she has had a profuse bloody discharge recurring at intervals of two weeks and less, at times only a few days intervening between the attacks, continuing for from several days to four and five weeks at a time. It is clotted and attended with considerable suffering. Sexual intercourse is painful, and frequently causes bleeding. She has severe occipital headache during menstruation. She has constant sacro-inguinal pains of a dull character, and a feeling of weight and dragging in the pelvis; all of which, as well as the hemorrhages, when present, are aggravated by exercise. The uterus is retroflexed and movable, the cervix enlarged and highly congested, the uterine canal patulous and measuring three and a half inches.

The bleeding was arrested within a few hours after making a positive intra-uterine application of galvanism, 50 milliampères, five minutes. On June 30, 1890, fourteen days after the first treatment with the battery, the menses appeared and continued for three days, profuse, but not painful. The fourth and last application of galvanism was made August 25, seventy-five milliampères, five minutes. Since treatment was discontinued she has menstruated four successive times, at intervals of twenty-eight and thirty days, with an almost absolute freedom from symptoms. She is no longer distressed with the sensations of weight and bearing down, sexual intercourse provokes neither pain nor bleeding, and she has been free from headache since electrical treatment was first instituted, save an occasional twinge during menstruation. The uterus is reduced in size, the canal contracted, but the flexion remains.

Case 6. Bessie F——, æt. 19, married one and one-half years, never pregnant, menses at fifteen, regular before marriage, continuing seven days, not painful. Shortly after marriage menstruation began to recur at shorter intervals than usual, until it appeared every two weeks; it continued from seven to ten days, clotted, and attended with excruciating colicky pains in the lower abdomen and pelvis. This still persists, and is becoming more pronounced with each succeeding period. The inter-menstrual periods are characterized by a constant feeling of distress over the hypogastrium, amounting—at times—to actual pain, severe enough to keep her awake at night. After five months' treatment with the dilator, combined with constitutional and intra-uterine medication without benefit, she was referred for electrical applications. The uterus was anteflexed and movable, the os the site of a mucoid discharge, the vaginal vault tender to the touch. Just before treatment with the battery was begun she had been bleeding almost continuously for more than a month. September 22 to October 10, 1890, four positive intra-uterine applications of galvanism were made, the highest intensity administered was sixty milliampères, the lowest forty, for five minutes. September 29, three days after the second treatment, the menses appeared, covering a period of five days, and painless. Exactly twenty-seven days had elapsed between the periods—a thing that had not occurred for more than a year before. The menses came at the regular time in November, lasting five days and being painless. Patient now has neither a pain nor an ache.

Case 7. Mrs. A——, æt. 33, married fifteen years, two children, third and last pregnancy ten years ago, miscarriage after three months' gestation, which was attended with excessive flooding. For a period of more than five years subsequently she suffered from frequent and profuse uterine hemorrhages. At present she has what might be termed her regular menstruation at intervals of about four weeks, the "flow" continuing for eight and nine days, profuse, clotted and painful. The inter-menstrual periods are characterized by occasional hemorrhagic discharges, variable in quantity, but not excessive. Sexual intercourse is painful, and frequently followed by bleeding. She suffers from constant inguinal and hypogastric, dull, aching pains, and from a feeling of weight and distress in the pelvis; all of which are aggravated at the time of the menses and following undue exercise. The only time at which she enjoys comparative comfort is while lying in bed. The uterus is in the first stage of prolapse, movable, enlarged and rigid. The cervix is of a pale, ashy color, and enormously enlarged. The uterine canal is patulous, and the site of an ichorous, watery discharge. The cavity measures three and one-quarter inches.

Between July 29 and September 5, 1890 (38 days), five negative intra-uterine applications of galvanism were made, the intensities varying between fifty and seventy-five milliampères, for five minutes. She has menstruated regularly and has been absolutely free from pain since August last. She has

had no bleeding since July. Sexual intercourse is neither painful nor followed by bleeding. The uterus is reduced in size and the canal measures less than three inches, and is contracted and free from discharge. The patient states that she has not been so well for ten years past.

Case 8. Mrs. C——, æt. 45, married 13 years, two children, one miscarriage twelve years ago, after a six and a half months pregnancy, attended with convulsions, and excessive flooding. The convalescence was prolonged, several months elapsing before she was able to resume household duties. The last child was born five years ago, after a normal labor. She dates her present trouble from the miscarriage, after which her menses became more profuse and painful. She has been suffering with constant, heavy, dragging and dull pains through the pelvis ever since, with pain in the back and groins, all symptoms being aggravated on locomotion. At that time menstruation was continued for a week and longer, was abnormally free, and very painful for several days preceding and during the "flow." Leuchorrhœa was profuse. Micturition was frequent at the time of the menses. She had vertical and occipital headache, with frequent nausea and vomiting. The hypogastrium was tender to pressure. The uterus was low down in the vagina, enlarged and movable; the cervix passively congested, eroded and enormously enlarged, the uterine canal patulous, measuring four inches, and the site of a profuse muco-purulent discharge. The vaginal vault was extremely tender to the touch. The abdomen was enlarged and pendulous, requiring a binder during the day, and a pillow to support it at night. The patient has had twenty-one intra-uterine applications of galvanism, both negative and positive, since February 3, the intensities ranging from 35 to 75 milliampères, five minutes. The time elapsing between treatments, owing to the patient's inability to come regularly, has varied between five days and two months. She is still under treatment.

She has undergone a slow but gradual and progressive improvement since the day the battery was first used, both anatomically and symptomatically. The whole uterus has undergone great diminution in size. The cavity now measures less than three inches, and there is decidedly less tenderness of the pelvic floor. The abdominal walls, the patient herself observes, have regained some of their lost tone, so that now the pillow for support at night can be dispensed with. The menses are regular, continue from three to five days, and are painless. The general pelvic distress is much relieved. In her own words, electricity has done her more positive good than all other means of treatment combined for years previously.

Case 9. Agnes F——, æt. 27, single, for a year preceding puberty suffered from frequent attacks of colicky abdominal pains, and constant backache. Her menses began at seventeen, were regular, and continued for one and a half days, scanty. The very inception of the "flow" was always attended with excruciating uterine pains, every moment contributing to her suffering for from five to six hours, rendering the free use of morphia, or whatever narcotic might be at hand, a necessity. She had been under the constant care of physicians for years, and was treated with the battery from January to July, 1888, without benefit. She does not know the kind of electricity that was used, nor how it was administered. She applied at the clinic October 28, 1889. The uterus was in the normal position, and movable, and presented cervical endometritis. A week later the cervix was dilated under ether. Four days subsequently the menses appeared, just as painful as ever. January 3, 1890, negative intra-uterine galvanism was used, 45 milliampères, five minutes. Menses came on in three days and continued for four days—a longer period than ever before—with comparatively little pain. Two negative applications preceded the following period, which began February 6, and continued for five days, painless. The fourth and last galvanic treatment was on February 13, 1890, since which time she has menstruated regularly, the "flow" continuing for four days without pain.

Case 10. Mrs. G——, æt. 28, married two years and a quarter, no children, complained of excessive pain on sexual intercourse, the mere attempt at which excited violent spasmodic contractions of the muscular structure of the vagina, and threw her into a state of nervous excitement and trembling, frequently rendering its accomplishment impossible. The sensibility is of such an aggravated type, that, as soon as the finger touches the vulva, this neuro-muscular condition supervenes, the patient at the same time giving evidence of suffering pain, and evincing great nervous disturbance. This trouble has been the source of much unhappiness between herself and husband.

She was under treatment at this clinic two years ago (shortly after marriage) when the application of cocaine and repeated dilatations gave temporary relief. She returned with the disease in an aggravated form. Between September 22 and October 6, 1890, five applications of galvanism were made, vagino-abdominal, 15 to 30 milliampères, five minutes. After the third application the spasm and pain were entirely relieved, and coitus was satisfactory. The cure has remained permanent.

If time permitted I might continue to review the histories of ten additional patients here to-day—cases duplicating some of the various forms of uterine disease already illustrated, and in which the application of galvanism proved its curative properties to no less a degree.

All of these cases had been subjected to various other modes of treatment previous to the employment of electricity, with but slight benefit in some and none at all in others; and in order to be certain that the results obtained are the legitimate outcome of the galvanic applications alone, no other means of treatment were resorted to either during or subsequent to the use of the battery. In some of the cases of chronic parenchymatous metritis especially, improvement would in all probability have attended our efforts much more rapidly, and the end in view would have been attained with greater certainty, had the electrical treatments been supplemented by other therapeutic measures—derivative, antiphlogistic and tonic.

Of six uterine fibroids treated with the battery, four were more or less hemorrhagic in their tendencies; and in every one of them the intra-uterine application of the positive pole proved its hemostatic properties immediate and remote, and the results obtained have been lasting. In only two of the cases has there been a positive and indisputable reduction in size. When we consider, however, that this was the object in view in but three of the entire number of cases treated, it certainly speaks well for the battery. The case in which it failed was a fibroid of enormous size. The patient was under treatment about six weeks, during which the tumor kept on growing at its usual rate. After the eighth application the patient ceased coming to the clinic, and was lost sight of.

Where the object was to arrest hemorrhage alone, the tumors being small, and giving rise to no other untoward symptoms, the indication being met, the treatment was discontinued. In none of the latter has there been any increase in size. On the other hand, I cannot say that any have grown smaller; slight changes may have taken place, but owing to their location, the sense of touch—a most uncertain means of measurement—is our sole reliance in determining their dimensions.

The use of galvanism in the treatment of pelvic adhesions and uterine displacements, save in so far that it often corrected concomitant diseased conditions of the organ and relieved symptoms, appears to have given negative results. But you must not accept my statements on these questions as conclusive. I may have failed where others more skilled in diagnosis, and more dexterous in the use of apparatus, and possibly less timid than myself in applying heavy currents, might have succeeded, and with an increasing experience my views in some respects may undergo a change.

Not every woman coming to your office having a chronic endometritis should have an electrode thrust into her uterus. There are certain diatheses, and diseased conditions of other organs, as well as feebleness of constitution that predispose to the development of this disease, so that it often is but one of several diseased mucous membranes, the result of a special tendency of a constitutional state. Turn your attention to the predisposing cause first; the endometrium may require attention, but not always. Hemorrhage from the uterus even must not be regarded as an invariable evidence of disease of the organ *per se;* it may be, and often is, an expression simply of a general vascular tension, or other constitutional condition, depending upon alcoholic excess, diseased state of the blood-vessels, heart, liver or kidneys, or of impairment of nervous function, which simple hygienic measures and intelligently applied pharmaceutical remedies may correct without any intra-uterine tinkering whatever. Just so with diseased states of the parenchyma of the organ; electricity should be regarded as an auxiliary in their treatment, and not as a "cure-all" to be used in every case, and to the exclusion of everything else. Always bear in mind that a chronically inflamed uterus is enlarged, that it drags upon surrounding structures, and that, owing to interference with the return circulation, it is in a state of constant passive congestion. In conditions like this,

five things are always in order—rest, tonics, saline cathartics, hot vaginal injections, and glycerine tampons. These of themselves, diligently applied, will often bring about vast improvement, and effect a cure in not a few cases. These things considered, we think of the electrode last, because every intra-uterine operation carries with it a certain amount of risk, and nothing should be introduced into the uterine cavity unless it is specially indicated to obtain a definite object in treatment.

It follows, therefore, that a gynecological electrician, above all, should be a good, all-round general practitioner, with special experience in the treatment of pelvic disease. A correct diagnosis is of first importance to successful treatment, and the mere specialist, who sees nothing except through a vaginal speculum, who concerns himself little about the value of drugs and properly regulated regimen, and whose therapeutic armamentarium consists of an applicator, a knife, or an electrode, will frequently fail to give relief, and often do positive harm.

Gynecological diagnosis, among the most experienced, is often difficult and obscure. Dr. Joseph Price reports cases in which ectopic gestation has been diagnosticated as ovarian cystoma, pyosalpinx and fibroid tumors. Fibroids have been denominated ovarian cysts and *vice versa*. Dr. Anna Fullerton reports a case in which a small dermoid cyst had been called a prolapsed ovary, another of "retroflexed uterus fixed by adhesions with hematosalpinx of one side, and hydrosalpinx of the other, accompanied by hemorrhage, which had been thought to be in a condition resulting from miscarriage, and curretting of the uterus was advised, or the application of electricity to the endometrium." An error in diagnosis, such as the one made in the last case, might have proved fatal to the patient had the treatment originally advocated been carried out.

In the present state of our knowledge of pelvic disease, great caution should always be observed lest we do harm by the application of local measures hastily adopted. Founding my convictions upon individual experience, in connection with what I have witnessed at the operating table, I, to-day, do not consider it a safe procedure to make cauterizing intra-uterine applications of galvanism, if evidence of disease of the uterine adnexa is present. That disease of the appendages exists, is sufficient warning, because it is no more given to a gynecological electrician to make an exact diagnosis than it is to the abdominal surgeon whose preconceived opinions are often shown to be erroneous by what he finds on "section."

COMMUNICATIONS.

SUGGESTIONS FOR ABDOMINAL OPERATIONS AND AFTER CARE.

BY WM. GOODELL, M. D.,
PROFESSOR OF GYNECOLOGY IN THE UNIVERSITY OF PENNSYLVANIA.

[The following is the form of letter prepared by Prof. Goodell, to be sent to physicians for whom he expects to perform an abdominal section. It furnishes full instructions in regard to the preparation for operation and the after care of the patient, with the necessary apparatus and appliances.]

Please procure the following articles for the operation of abdominal section to be performed ———, at ——— o'clock, on your patient, ———.

Two yards rubber plaster.

Two rolls of raw cotton, which have been well baked in an oven, and while hot carefully wrapped up in clean brown paper.

Two yards and a half of all-wool flannel, for two binders.

Two pounds of ether, together with an Allis's inhaler; or else a clean towel without a fringe, and a newspaper, with which to make an ether-cone.

Two ounces of Monsel's solution of iron.

One gallon and a half of a 5 per cent. solution of crystalized carbolic acid.

Half an ounce of iodoform.

Some antiseptic cotton and some tablets of corrosive sublimate.

Whiskey, with cup, spoon and sugar.

A pin-cushion, with large pins and safety-pins.

A washstand, with pitcher, basin, slop-jar, soap and nail-brush.

One china basin for the sublimate solution.

Two new tin basins, and one tin cup.

A bucket and a pitcher of hot water.

A small tub and an empty bucket.

Two kettles of boiling water, ready on the range.

Pure cold water in abundance, that has been boiled and kept in covered vessels.

Two large platters, or meat dishes, to be used as trays for the instruments. Or a tin tray may be made nineteen inches long, twelve wide and three deep.

Six bottles filled with hot water and tightly corked.

Three clean kitchen aprons for the operator and his assistants.

One small table for the basins.

Two tables on which to operate, each one not less than four feet long, and about two feet wide. Or an operating table may be made twenty-two inches wide, thirty-one inches high and six feet long.

One empty wine-bottle for the aspirator.

One clean blanket for patient's lower extremities.

Clean towels, clean sheets, clean blankets.

Clean comforters and clean pillows.

Have all the foregoing articles in the room in which the operation is to take place.

Early in the morning of the day preceding that of the operation, let your patient get her bowels thoroughly opened—preferably with Rochelle salts—and afterwards eat sparingly of liquid food. Next morning her lower bowels are to be moved with an enema of soap and water, and the vagina is to be washed out with a douche of a 1 : 2,000 solution of mercuric bichloride. She should then take a warm soap bath, be washed clean by her nurse, put on clean night-clothing and go to a clean bed.

To avoid ether-vomiting her breakfast should consist merely of tea and toast, or of a cup of beef-tea, or of a goblet of milk, and, thereafter, she must eat nothing more. She must not get up, but must stay in bed until the hour fixed upon for the operation, when she should put on a flannel sacque and woolen stockings and drawers. The bedstead, on which your patient is to lie after the operation, should be furnished with a mattress and not with a feather-bed.

The room in which the operation is to take place ought to be a separate one, so that the patient may be etherized in her sleeping-room, and not be unnerved by witnessing the needful preparations. Several days beforehand, the carpet of this operating room should be taken up, and the curtains taken down for good. The closets and bureau-drawers should be emptied, and the whole room — floor and walls — be thoroughly cleansed and aired. Early in the morning of the day fixed upon for the operation, this room must be heated up to at least 70°. After the operation your patient may occupy whichever of these two rooms she prefers.

Not more than two assistants—viz., yourself and another physician—will be needed, and bearing in mind that the most common cause of danger from this operation is septicemia, let both of you take a soap-bath, put on clean clothing, and avoid seeing on that morning any case of zymotic or of contagious disease. Let these precautions be observed also by those medical friends whom you may invite to see the operation.

The treatment after the operation needs careful attention. Your patient must be made warm with the hot-water bottles, and be kept perfectly quiet. For several days no one should see her but yourself and the nurse. For obstinate vomiting, which comes partly from the ether and partly from the shock, whiskey or chloral, or the wine of pepsin may be given in small doses, frequently repeated. Sips of very hot water, or a tablespoonful every hour of a mixture containing equal parts of lime-water and of cinnamon-water, are also good remedies. If the vomiting is very stubborn, a hypodermic injection of morphia will often allay it; so also will one of atropia. I have seen it yield to frequently-repeated doses of five grains of bismuth, one drop of dilute hydrocyanic acid and three drops of wine of ipecacuanha. Flatus is another very annoying symptom, which, however, can very generally be dispersed by turning the patient on her side and inserting a flexible catheter as high up the rectum as possible. If this fails to relieve it, or the temperature rises simultaneously with its appearance, saline cathartics should be given, aided, if needful, by turpentine enemata. A very safe rule to follow is, to open the bowels whenever wind does not escape per rectum and tympanites begins to show itself.

For the first twenty-four hours after the operation *nothing whatever* should be given to the patient excepting sips of hot water or of hot tea without sugar or milk, and an occasional teaspoonful of old whiskey; but even these should be given sparingly. After that time, tablespoonful doses of milk, of beef-tea, or of barley-water may be given every two hours. This diet must then be gradually increased, and especially if wind begins to escape from the rectum. If, during the first twenty-four hours, nourishment seems indispensable; or if, later on, more nourishment than that given by the mouth is needed, you must resort to nutrient en-

emata of peptonized milk, or of beef-tea with whiskey.

Should the patient be able readily to pass her water into a urinal, it need not be drawn off. Otherwise, it must be drawn off regularly every six hours for the first two or three days. Later than this, the catheter need not be used so frequently, but only when the patient wants it. On the morning of the third or the fourth day, even earlier if tympanites appears, the bowels must be opened, preferably with saline cathartics, and thereafter they are to be moved every other day. The cathartics which I prefer are teaspoonful doses of Rochelle salts every hour, or a Seidlitz powder every two hours.

No anodyne whatever need be given, unless called for by great pain, or by excessive restlessness. Should the body-heat indicate a temperature of 101° or over, an ice-cap or a bladder filled with ice should be kept on the head of the patient as long as it does not chill her, and it feels comfortable. Peritonitis, or other septic symptoms, must be treated with ice to the pit of the stomach in addition to that on the head, and with brisk saline cathartics followed by large doses of quinia, and by morphia enough to allay the pain.

If a drainage-tube has been put in, it is to be sucked out dry every two, three or four hours, by means of a small syringe to the nozzle of which a short piece of rubber-tubing has been attached. Every time this is done, a fresh piece of sublimated cotton is to be placed over its mouth. Twice a day should the drainage-tube be lifted up half an inch, and turned wholly around on its axis. Unless this is done fringes of the omentum, or shoots of organizing lymph may get into the tube-holes, and by swelling up inside of the tube, prevent it from being withdrawn without great and dangerous violence. The drainage-tube is to be removed whenever the fluid withdrawn from it becomes clear and straw-colored like serum. The opening left in the wound must be dusted with iodoform and covered with sublimated cotton or gauze.

The dressing, being antiseptic, need not usually be changed until a week has passed. Every stitch may then be removed, and the wound may be washed with a 1:2,000 mercuric solution, dusted with iodoform and supported with long and narrow strips of rubber plaster. Over this some sublimated cotton or gauze should be placed, and over all a clean binder. For fear of a weak cicatrix and the formation of a hernia at the site of the wound, the patient should not get out of bed for at least two weeks, and should for six months more wear some kind of gored binder, or an abdominal supporter like "The London Supporter."

If the foregoing directions do not cover every point or do not meet every contingency that may arise, do not hesitate to consult me by letter or by telegraph as often as you may wish.

LAPAROTOMY IN INTESTINAL OBSTRUCTION.—REPORT OF A CASE.[1]

BY ALEX. McALISTER, M. D.,
CAMDEN, N. J.

The time for operation in cases of intestinal obstruction is when the diagnosis is made, and before complications and structural lesions have taken place in adjacent and remote organs, and when the patient is in the best possible condition for operation. Surgery has made rapid strides, and in no special field has there been more advance than in intestinal surgery. The mortality from delay, incorrect diagnosis, timidity, ignorance and prejudice in the past has been very high. We have a safe and reliable, speedy and accurate method of diagnosis of intestinal obstruction, namely, Senn's hydrogen gas inflation of the intestines. Senn deserves much praise for his inventive genius, originality and experimental research in intestinal surgery. Keith, in speaking of the failures in abdominal surgery and hindrances to its progress, states that most of the injury has been done by the surgeon himself. Time waits for no surgeon. Delays are dangerous. Formerly, the phrase, "obstructed bowels" was synonymous with death. To-day it means: use the test, operate, remove the cause and let the patient live. When done early by expert surgeons, and before structural lesions have formed, laparotomy for intestinal obstruction will have as small a mortality as ovariotomy. The physician of the present and future, who is not equipped to make the special diagnosis of obstruction, operate for the removal, or have a surgeon operate, and before serious tissue lesions have taken place, is most certainly highly culpable and derelict of duty.

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[1] Read before the Camden County Medical Society, February, 1891.

The best time to operate is when the diagnosis is made, and made early. Wyeth states: "Do not wait longer than the lesion of intussusception is recognized. Within the first twenty-four hours the prognosis will be more favorable, and the danger of a fatal termination will be increased with each day thereafter." If volvulus is not removed within a few hours by other treatment, abdominal section should be performed, the hand should be introduced and the loop should be untwisted. Constriction by bands, the vermiform appendix, the pedicle of an ovarian or uterine tumor, the Fallopian tube, diverticula, strangulation through slits in the omentum and mesentery and adhesions between the contiguous loops of intestines, demand early operative interference, as do all other forms of intestinal obstruction. That taxis should not be done longer than five or ten minutes at any one effort. It may be repeated at intervals of half or one hour, within the first six hours of the history of strangulation. After twelve hours, it should not be practiced. The majority of cases which end fatally are those in which strangulation has existed twelve or twenty-four hours or more before surgical interference. Abdominal section under asepsis and antisepsis in a patient not exhausted by suffering or disease, is almost free from danger, when done early by a surgeon skilled in the technique of intestinal and abdominal surgery.

Scientifically practiced massage and taxis have a limited range of application in the treatment of intestinal obstruction. They are applicable to cases of obstruction due to a foreign body, an enterolith or fecal accumulations, and should be resorted to only before inflammatory changes have developed at the seat of obstruction, and while the patient is under anæsthesia. The rule now is not to wait hours, or a day, to do taxis, but to do it only for fifteen minutes, and never over thirty.

Senn states: "True intestinal obstruction, whatever its cause may be, is as strictly a surgical affection as strangulated hernia, and remediable only by the same kind of surgical treatment." To let a patient die of the consequences of a removable cause of obstruction, without an operation, is a reflection upon the advances of modern aggressive surgery. In doing an abdominal section for obstruction, the aim of the surgeon should be to save life, to operate quickly, safely and cautiously, and not to do an ideal operation, but to economize time, minimize shock, lessen the stage of anæsthesia, prevent unnecessary extrusion of the bowels, and protect them with hot aseptic towels; to irrigate with hot aseptic water, and prevent complications, making all the details of the operation aseptic from beginning to end.

The technique of this operation has been much simplified by Senn's intestinal anastomosis, lateral apposition, lateral implantation and intestinal exclusion, and Senn's modification of Joberts' operation by circular enterorrhaphy, will greatly lessen the mortality of intestinal obstruction in the future.

On July 14, 1890, I was called in consultation by Dr. Kensinger, to see J. S., thirty years old, born in Poland, by occupation a painter. He had been suffering with symptoms of obstruction for about four days. His abdomen was distended and tympanitic, and there was some dulness in the right flank. His extremities were flexed; and his expression anxious. He had fecal vomiting and great and frequent abdominal pain, referred to the umbilicus. His pulse was 130; his temperature $102\frac{3}{5}°$; his respirations 30.

I urged immediate operation, which was readily assented to by the patient and his relations. I operated, being assisted by Drs. Kensinger and Sherk. The patient was etherized, an incision five inches long was made in the linea alba, between the umbilicus and the pubes. Several loops of intestine presented, which were immediately covered with towels wrung out of hot water. Passing my hand into the cavity, after careful examination, I found a loop of ileum about eight inches long, about two inches below the umbilicus, twisted upon itself from left to right. The omentum was pushed firmly against it, and the part of the intestine where the twist existed was very dark in color, and looked gangrenous. I also found small spots throughout the small intestine which also looked gangrenous, and the intestines were congested looking, and very much distended with gas, which escaped by the rectum, after the twist was released.

Irrigation was copious and thorough, and some water was left in the cavity. No drainage was used. The incision was closed with silk. The duration of the operation was about a half-hour. An antiseptic dressing was applied, and the patient was

placed in bed. Very little shock followed the operation, and no vomiting. Reaction was rapid. The bowels were freely moved. In less than an hour after the operation the patient was given drachm doses of sulphate of magnesia, every two hours, and by the next morning he had passed a house-bucketful of feces. His temperature was 100°. After this convalescence was uneventful.

Two weeks from the time of the operation he was back at his trade, and he has been perfectly well up to date.

ARTERIO-CAPILLARY FIBROSIS.[1]

BY AUGUSTUS A. ESHNER, M. D.,
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Every cell inherits from its parent cell a certain lease of life, at the end of which physiological death occurs. This period, however, may be influenced by external conditions. Premature death is pathological. We cannot recognize a pathological longevity. Similar laws apply to the human individual, the composite of a vast aggregation of cells of widely differentiated function.

The life of man may be divided into three periods: that of evolution, of growth, of development; that of maturity, of perfection; and that of involution, of decline. The first begins with birth, the last ends with death.

During the period of growth and development, tissue-change and destruction—catabolism—are more than offset by tissue-construction and repair—anabolism. Nutrition exceeds waste. Building-up is more active than tearing-down. With the activity of life comes the demand for the highest differentiation of function of which the organism is capable. This represents the perfect individual. For a time, a condition of equilibrium is maintained. Sooner or later, however, the tide begins to turn. The equilibrium is disturbed. Waste exceeds repair. The cellular assimilative function becomes impaired, the constitution of the nutritive fluids defective. Tissues and organs are imperfectly furnished with the materials for their maintenance. Vascular changes occur. In a vicious circle, one baneful influence reacts upon another. The entire organism is reduced to a condition of deterioration. Finally, the state of nutrition falls to so low a level as to be insufficient for the purposes of life, and functional activity comes to a standstill. This is the physiological process, as it occurs at advanced age, and constitutes the condition of senility. Occurring at an earlier period, however, the process becomes pathological, recognized clinically by signs and symptoms which may be conveniently included in the designation premature senility.

As the component parts of the organism depend for their sustenance upon the nutritive elements of the blood, so will their functional stability be governed by the quality and quantity of the circulating medium. Thus, we would be led to look to the blood as containing the excitant which induces the earliest changes. The function of the cell once impaired, the deleterious action of the blood would be augmented by the retention of matters which it was the part of the cell to remove, and the addition of products from the degeneration of the cell.

Pathologically, the condition under discussion may be considered a general fibrous substitution and hyperplasia, displacing parenchymatous structures and narrowing the lumen of arteries and capillaries; hence the names arterio-capillary fibrosis, arteriosclerosis.

The histological changes may arise in one of two ways, or in a combination of both. When tissue degenerates or is destroyed, nature endeavors to make restoration. The attempt is often only partially successful. The newly-formed tissue is apt to be of a lower grade than that which it replaces. The more highly organized the latter, the wider, of course, is the variance. In this way, fibrous tissue takes the place of vital structure. This is illustrated in the cicatrix, be it cerebral or cutaneous or parenchymatous. Under other circumstances, there occurs a primary hyperplasia of pre-existing connective-tissue, perhaps of a subacute or slowly chronic character, displacing the tissue proper to the organ, and finally leading to its disorganization. These two processes may be illustrated by the modern pathological conceptions of the changes that occur in certain diseases of the central nervous system. In the acute inflammatory disease known as anterior poliomyelitis, the destruction of the ganglion cells in the anterior horns of the gray matter of the spinal cord

[1] Read before the Philadelphia County Medical Society, March 11, 1891.

is followed by a reparative process, in which fibrous tissue replaces that which has been destroyed. In the systemic scleroses, posterior and lateral; in the degenerations, ascending and descending, primary destruction of axis-cylinders takes place, with secondary substitution of fibrous tissue. In insular sclerosis, on the other hand, there is at first an increase in the connective-tissue, followed by gradual destruction of nerve-elements and interruption of function. The difference is that between inflammation and cirrhosis. Solid viscera may be unchanged in size. They are rarely enlarged, but often shrunken, from contraction of the fibrous elements. The coats of the vessels are thickened, and their lumen narrowed. In whatever structure the process begins, it is slowly progressive, especially if the exciting influence be maintained. The change, as it affects the arteries, is to be distinguished from atheroma, with which it may be associated. Both are evidences of senile disorganization. In atheroma, however, the process is one of fatty degeneration of the intima, giving rise to ulceration, which is in turn followed by cicatrization and calcification. In the one condition, clinically, the vessel, to the eye and to the examining finger, is tortuous and resistant; in the other, it is rigid and unyielding, like a pipe-stem. It is the difference between fibrous and calcareous infiltration.

The etiological elements concerned in the production of arterio-capillary fibrosis are comprised in the group of noxæ which we now know as toxic and infectious, and include syphilis, alcoholism, lead-poisoning, gout, rheumatism and infectious diseases in general. Heredity, too, probably plays some part in transmitting a predisposition to the occurrence of fibrous degeneration.

Perhaps the most conspicuous symptom, and that for which the patient first seeks relief, is shortness of breath on the slightest exertion. The onset of this condition is so insidious that the patient is unaware of its existence, until it is suddenly revealed by a demand for some special activity. With it is often associated palpitation, which the patient is apt to describe as a fluttering of the heart. The cardiac action is found to be irregular, perhaps intermittent, with occasional duplication of the second sound or an abortive first. The second sound is distinctly accentuated at the base. The pulse is tense and resistant. The temporal arteries are prominent and tortuous. In addition, the patient complains of coldness of the extremities or of numbness or of formication, with, perhaps, some weakness. There may be vertigo, especially on sudden changes of posture, lightness in the head, as the patient says. The memory is impaired, and there may be headache. The knee-jerk is frequently exaggerated, but not always. Often there is tremor, and sometimes nystagmus. In some cases, the complexus of symptoms approaches that seen in insular sclerosis, in others that seen in paralysis agitans, though typical of neither. It may be that such cases represent incipient stages of the one or the other of these affections, which, in their turn, perhaps, may be more intimately related than we as yet know. Occasionally, we meet with transient paresis and local paralysis, sometimes ascribed to uremia. It seems easier to explain the occurrence of these on the assumption of partial vascular occlusion. The feet are sometimes swollen. There is apt to be increased frequency of micturition of a urine of low specific gravity, but rarely containing albumin or casts.

The train of symptoms here outlined may be readily explained by the pathological lesion. How common it is at autopsies to find organs the vessels of which gape with open mouths, while, during life, the only condition determinable was such an association of symptoms. It is neither nephritis nor arteritis, neither myocarditis nor cerebritis, but a diffuse fibroid change, the manifestations of which are perhaps most patent in the small arteries. Thus, we see associated with this condition miliary aneurisms in the brain, which we now know to be so generally antecedent to cerebral hemorrhage. In the absence of aneurism, the vascular fibrosis may alone act as a predisposing cause of rupture. The narrowing of the cerebral capillaries may become so marked as to permit of the formation of thrombi *in situ*, thus explaining certain cases of hemiplegia in which cardiac lesion or other source of embolism cannot be detected. It is also probably in the thickening of the wall of the capillary and the narrowing of its lumen that certain cases of transient or permanent loss of power, in which the severity of the symptoms soon abates, may find explanation. The derangement of cardiac function is a result of defective nutrition and innervation. The shortness of breath is brought about by the cardiac incompetency, by the vascular changes in the pulmonary structures, and, finally, by lowered

innervation, in some cases aided by concurrent emphysema. Other visceral symptoms are due to changes of a similar nature in the respective organs. The extremities are cold because the blood-supply through the narrowed vessels is imperfect.

In the consideration of the treatment of this condition, not much need be said in the way of prophylaxis. "All the medicines in the world will not replace right living." It is the secret of longevity.

In the general management of the case, the individual is to be directed to lead a tranquil life, to avoid excitement and undue physical exertion, to partake of a light, nutritious diet, which, with benefit, may include a liberal supply of milk, and to take an occasional saline laxative.

Of medicaments, I have personally had the most gratifying results from the administration of nitro-glycerin, in combination with digitalis when the cardiac action is feeble or its rhythm disturbed. Nitro-glycerin is a diffusible stimulant, causing dilatation of the peripheral capillaries, thus permitting a flushing of the tissues with arterial blood, and promoting nutrition. By diminishing the resistance in the vessels, the demands upon the heart are lessened, while this organ, being better nourished, is more competent to carry on its functions. Beginning with one minim of a one-per-cent. solution three times a day, the dose is progressively increased one minim every second day, until physiological effects—flushing of the face, sensation of a band around the forehead, headache and dizziness—are observed. Probably the most appropriate menstruum is spirits of nitrous ether, the action of which, as a nitrate, is synergistic. In administering digitalis, I like to prescribe two to five minims of the tincture in two drachms of the infusion, in this way obtaining the benefit of all the principles of the crude drug soluble in alcohol and in water.

Strychnine and atropine may prove useful adjuvants in the treatment. Under certain circumstances, it may be desirable to substitute strophanthus for digitalis. Caffeine or cocaine may fulfil certain indications. Cod-liver oil might be used as a nutrient, alcohol as a stimulant. Iodide of potassium is of doubtful utility, except during the active stage of syphilis.

The conclusions I wish to record are: That there is a pathological condition in which the manifestations of senility occur prematurely, and that the best means of combatting it is by improving the general nutrition and giving tone and stability to the cardio-vascular apparatus—a healthy nutritive fluid, with a competent distributing apparatus.

PERISCOPE.

Use and Abuse of Drainage in Surgery.

In the *Medical Record*, March 14, 1891, Dr. James E. Moore, Professor of Orthopedic Surgery in the University of Minnesota, says: The besetting sin of our profession is our tendency to go to extremes. We discover something the judicious use of which would be of untold value to the human race, and are not content with its proper use, but must needs overuse it until its use becomes an abuse, when a reaction sets in and abuse is many times followed by disuse. In the matter of drainage of wounds we are still in the stage of abuse. Reaction has already set in, and inasmuch as proper drainage is such a vital part of surgery, it is our duty to study the subject carefully and not allow disuse to follow abuse. This reaction first began in abdominal surgery, and already we have learned that in a certain class of cases in which we at one time thought drainage an essential, we get the largest percentage of recoveries without drainage. Laparotomists have pretty nearly arrived at the truth, viz., that septic cases and doubtful cases should be drained, and that aseptic cases are better without drainage. I fear that in this important branch of surgery the reaction has a tendency to go too far, and that certain cases are left without drainage that would be better with it. We can also see some reaction in amputation wounds, where, instead of the sewer pipes of former days, we use drainage-tubes of smaller size, or none at all.

We, as members of the grandest profession on earth, have weighty responsibilities, and are held strictly accountable for our deeds and misdeeds, but, being only human beings, are entitled to the privilege of changing our views with increase of knowledge. In fact this is the only way we can advance. The very fact that our responsibilities are such weighty ones should remind us that we should guard against our besetting sin and avoid extremes. This can only be done by refusing to accept the *ipse dixit* of any man, no matter how exalted his

position may be, and by basing our change of views upon facts, instead of following in each other's wake like a flock of sheep.

The thorough drainage of wounds has been considered of primary importance for many years, but when Chassaignac suggested the use of drainage-tubes in 1855 his reason for draining was very different from that of the surgeon of 1890. He drained to allow of the free escape of pus. We drain in recent wounds to prevent the formation of pus. The necessity for drainage in an infected or suppurating wound is universally understood. The more perfect the surgeon becomes in his antiseptic methods the less he needs drainage-tubes and their various substitutes, and when he arrives at that stage of perfection in his methods that insures him an aseptic wound every time he operates he can dispense with them altogether. In all recent works on surgery we are advised to use drainage-tubes to carry off the excessive discharges from a wound, but we are not advised to make an opening at the seat of a fracture to carry off the discharges. Those who first learned of the value of drainage in open suppurating wounds, also learned that Nature took care of the discharges from a subcutaneous wound. When we have so perfected our methods of wound-dressing that we can place an open wound in the same condition as a subcutaneous wound we will no more think of draining in one any more than in the other. If a wound is aseptic Nature will take care of the discharges, just as she does in a subcutaneous wound. In a simple fracture of the femur there is much greater effusion of blood and serum than in any operation wound, and we never think of draining it off. Nature takes care of it promptly, the only disturbance being a transient rise of temperature.

Twenty-five years ago surgeons drained to carry off the pus. Fifteen years ago they drained to carry off the discharges so that they would not putrefy. At the present time we drain largely from force of habit. We no longer believe in spontaneous generation, or that the discharges putrefy without first having been infected from without. Blood in an aseptic wound becomes partly absorbed and partly organized. Serum should not be looked upon as something to be gotten rid of, for it undoubtedly has an important function to perform in the reparative process. In certain cases that we are learning more about every day, viz., infected cases, we must always drain. I maintain, however, that in aseptic cases drainage by means of rubber or other open tubes is not only useless but adds an element of danger. We learned the value of drainage when septic surgery was practiced, and notwithstanding the fact that our reasons for drainage have undergone very radical changes, we have been using drainage-tubes, too, nearly like we did at first. The principal difference is, that we originally allowed the drainage-tubes to protrude through the dressings, thereby infecting every wound. We are now very careful to cover the ends of the tubes and to allow everything to pass out, and nothing to pass in through them, which is an exceedingly difficult matter. Aside from the fact that a drainage-tube is a foreign body and interferes with primary union, the one great danger is that it keeps an entrance-way open through which germs may enter and infect the wound.

It is customary to close small wounds in all parts of the body without drainage with very satisfactory results. I can see no reason why a large wound should require drainage any more than a small one, for the amount of absorbing surface bears the same proportion to the discharges in the one as in the other. I believe we have allowed the size of the wound to influence us too much when deciding whether to drain or not. The character and not the size of the wound should decide the question. I fear that we have fallen into the habit of draining every wound without thinking whether it is necessary to drain or not.

I was first led to question the propriety of draining every large wound by the annoyance occasioned by rubber drainage-tubes after operations upon tubercular joints. I found that the sinus caused by the drainage-tube almost invariably became infected and prolonged the case unnecessarily. Although I still drain in cases of this kind when there is a possibility that I may have overlooked some focus of disease, I never use rubber rubes, but use strips of iodoform gauze. In excision of the knee-joint my happiest results have been in cases where I have omitted drainage altogether, or have used a few strands of catgut. I get more satisfactory results after amputations, after operations upon breast and axilla, and, in fact, in all clean-cut wounds, without drainage than with it. No one prizes drainage more highly than I in proper cases, but it is not necessary in an aseptic wound. Those who do not work antiseptically must always

drain, because blood and serum when not protected from germs will surely putrefy in a wound, where all the necessary auxiliaries are found. The most zealous advocates of drainage are those who denounce antiseptic surgery.

It would be amusing were it not such a serious matter to see how zealous a dirty surgeon is in the matter of drainage. He usually carries his rubber tubing in the bottom of his satchel, after taking it from a dusty drawer in his office, and if he has not infected his wound earlier in the operation, always does so when he introduces his tubes.

When carbolic acid was so extensively used drainage was always necessary, on account of the excessive discharge caused by the acid. Lister, in his address before the last International Medical Congress, said that it would be a grand thing if we could do away with drainage altogether, and cited an instance in which he uses but one tube of moderate caliber, where he formerly used four of various dimensions. He speaks of the time when we shall have found drainage no longer necessary as the fulfilment of his early dream. If this great benefactor lives out his expectancy, I feel certain that he will see this day. The enemies of antiseptic surgery point to these advances of Mr. Lister's as evidence of its decay. But every fair-minded man knows that there has been no change of principles.

With all its perfections antiseptic surgery is far from being perfect yet, and many changes of detail are necessary, but these changes instead of being evidences of decay are certainly advances.

As Mr. Lister suggests, these advances are all in the direction of the hermetic sealing of wounds, and this is certainly the ideal method, as it is Nature's method. The hermetic sealing of wounds has been faithfully tried in the past, but the trial was made at a time when the principle of wound infection was undiscovered, and it was necessarily a failure.

Mr. Tait, in his criticism of Mr. Lister's address, claims everything for drainage. He says that when all decomposable material is removed by drainage, germs may be admitted freely. He states that the exclusion of germs is an impossibility, but does not seem to understand that perfect drainage is also an impossibility.

Prof. Erichsen, in some recent remarks upon this controversy, has certainly sounded the key-note when he cites the fact that two elements are necessary for putrefaction in wounds, viz., putrescible material and infective germs, and says that the disputants accomplish the same end by different means: Mr. Tait by removing the pabulum, and Mr. Lister by filtration of air and by germicides. He very wisely asks: "Is it wise to be exclusive in the employment of one or the other of these methods?"

I am certain that many wounds have been infected through the drainage-tubes because it was impossible to keep the ends of the tubes covered by the dressings. I have found it very difficult to keep the dressings close to the wound after radical operation for hernia, and have gotten much better results since I began to apply small strips of iodoform gauze with collodion.

In some operations upon bone and in Phelps's operation for club-foot, special effort is made to secure a blood-clot in the wound, in order that it may become organized. Ordinarily, however, it is important to stop all hemorrhage before closing a wound that we do not wish to drain.

Hematemesis in Gastric Ulcer.

In a very interesting paper on gastric ulcer—part of which is published in the *Medical Chronicle*, February, 1891, Dr. Dreschfeld, of Manchester, England, says hematemesis is one of the cardinal symptoms, and occurs in about one-third of all the cases. It may occasionally be one of the first symptoms, and it does not so rarely happen, especially in elderly patients, that hematemesis comes on in apparently good health. He has seen three such cases within the last eighteen months. In these cases large quantities of blood are vomited, sometimes even clots, and melena soon follows. In cancer of the stomach hematemesis is, he believes, never the first symptom, and if in cases of doubtless cancer, the history shows that hematemesis was one of the first symptoms, we may, he thinks, assume that we have to do with cancer implanted on an ulcer. This was seen in two cases under his care in the Infirmary, and in one case under the care of his colleague, Dr. Leech, as revealed by the *post-mortem* in these cases. In cirrhosis of the liver, and other diseases causing obstruction to the portal circulation, hematemesis may be the first or a very early symptom of the disease; but the history of the case, the presence of symptoms point-

ing to alcoholism, and the appearance of the blood, which is quite liquid and dark colored, help one in the diagnosis. Moreover, as the blood in these cases is venous, the hematemesis is rarely followed by intense anemia, and symptoms of depression. The hematemesis in these cases acts more like a venesection, and the patient after the attack often feels easier than before. The hematemesis in hysteria occurs chiefly in the morning; is, as a rule, small in quantity; and is, as we know, often due to various artifices which the patient has recourse to. This is, however, not as often the case as is generally supposed; and as spontaneous hemorrhages do occur in hysteria, there can be no doubt that in some cases the blood is really derived from the stomach. The presence of other symptoms of hysteria, such as hemi-anæsthesia, globus hystericus, hysterogenic zones, contraction of the field of vision, and so on, are important aids in the differential diagnosis. Such rare cases of hematemesis as those due to the bursting of an aneurism into the œsophagus (the bursting of an aneurism into the stomach is extremely rare) are quickly fatal, whilst hematemesis from an ulcer is after all rarely followed by death.

When hematemesis is not the first symptom, but occurs, as it often does, only during the course of the disease, then the other symptoms of ulcer such as localized pain and vomiting, precede it, and the diagnosis is not difficult.

The vomited matter in hematemesis from gastric ulcer has occasionally the character of "coffee-ground vomit," which is generally looked upon as characteristic of cancer of the stomach. This occurs at a late period of the disease, and is due to a slow and gradual extension of the ulcer, whereby only minute blood-vessels become eroded, and the small amount of blood altered by the gastric juice assumes this peculiar appearance. The vomit is by itself not to be distinguished from that of cancer, but the other symptoms present help to distinguish the one disease from the other.

Profuse hematemesis in gastric ulcer occurs more especially when the ulcer is situated at the pyloric end of the stomach, and more on the posterior than the anterior surface; this is due to the arrangement of the blood-vessels. From this follows two important considerations: First, when in gastric ulcer we get profuse hematemesis, we have, after a time, from the cicatrization of the ulcer, contraction of the pylorus, giving rise to symptoms of dilatation of the stomach. Second, the ulcer gradually extending in depth causes, from its position on the posterior wall, adhesion between the stomach and pancreas, and perforation of the ulcer in these cases is not likely to happen. It is different when the ulcer is situated on the anterior wall, the extension of the tumor in depth is not likely to lead to any adhesions, for the constant movement of the abdominal walls would hinder any such adhesions to form, and hence the frequent perforation of such ulcers; the same holds good if the ulcer extends towards the lower curvature. We can thus understand that perforation is more apt to occur in those cases where there is no hematemesis, or only slight hematemesis, and where symptoms of pyloric constriction are absent.

Open Operation for Strangulated Hernia.

Dr. Benjamin T. Shimwell, in the *Medical News*, March 14, 1891, says:

The classical operation for strangulated inguinal hernia has only partly met the requirements. The advance made in surgery, more especially in that of the abdomen, has allowed a greater liberty of action, which seems not to have been properly taken advantage of in the treatment of this condition. This paper is written to show the advantage gained by the open method of operating—that is, cutting directly through all the tissues of the tumor, including the external ring, internal ring and, if necessary, the abdominal wall, converting a simple herniotomy into a hernio-laparotomy. The condition of the protruding gut is modified by its pre-existing condition, the size of the protrusion, the length of time of strangulation and the position of the constriction. An old incarcerated hernia with a sudden increase of the protrusion and consequent constriction gives an abnormality in relation of structures and their component characters, that has no resemblance to an acute case and causes a difference in the ultimate results of treatment. The size of the protrusion is not so much a factor in causing constitutional symptoms as is supposed. I have seen as violent symptoms in a small protrusion as in one of greater size.

The length of time of constriction also modifies structural capacities, and directly influences the result. The point of constriction may be at either the external or in-

ternal opening, or, what is often overlooked, the true constriction may be the neck of the peritoneal sac, the inguinal rings acting merely as a barrier to the return of the gut and not as a true constrictor.

A careful consideration of these propositions opens a field of thought that must of necessity show the inefficiency of the nicking of the external ring from below. The extension of the incision cannot be said to complicate matters by increasing the risks. It is settled beyond peradventure, that careful increase of a few inches in the length of an incision, whether in the abdomen or anywhere else, does not increase the risks.

Compare the old method with the certainty of work and view of field, the definite knowledge of conditions of the injured gut, and the lessening of risks which were due to handling of gut by the drawing down preparatory to reduction. Would an abdominal surgeon operate in a case with marked adhesions through an opening of the same size that he would in a simple uncomplicated oöphorectomy? Working in the dark is prolific of bad results. It is not in the power of any man who operates for strangulated hernia by the old method to tell with certainty the condition of the bowel, and thus it is that many cases end in death by inflammation of, or ulceration and necrosis of the bowel at the point of constriction. The condition of the congested bowel is the point always to be regarded in determining whether it will regain its normal state. To me it seems that not enough importance is laid upon the condition of the tissue at the point of constriction. There is often an amount of injury done that causes the most serious results. There is the question of necrosis, which is one of importance, and then also the loss of nerve vitality by constant constriction, which is often marked. I have seen this persistent at the end of days, the obstruction still remaining.

Paralysis of a portion of the bowel prevents fecal circulation; the bowel forces its contents to this point, and then is unable to send them further. Gas and fecal matter will enter a paralyzed portion. Continuous action is a necessity. As a proof of this point, a patient upon whom I had performed hysterectomy died suddenly from tympany produced by obstruction of the bowels due to paralysis. The case was one in which every means were tried to relieve the condition. The *post-mortem* examination disclosed the point of paralysis in the lower portion of the ileum. The bowel walls were flaccid at this position for about two inches. Above this the whole canal was enormously distended, while below to the anus it was entirely empty. Experiments on dogs have shown the same results.

It is in the ability to appreciate these conditions properly that the open incision has its strongest advantages. A full inspection of the injured bowel indicates the treatment where special conditions arise, as does the question of resection when gangrene is imminent, or in those cases in which it is apparent that the point of constriction will not regain its tone. The importance of resection in the latter cases has been impressed upon me by the condition of those that I have seen. This loss of tone is apt to be present in old incarcerated hernias, in which narrowing of the canal by pressure has altered the structure of the walls, and in such cases the increased constriction has injured an already impoverished part. Another advantage is the certainty of the complete return of the protruded gut into the abdomen.

The possibility of a radical cure is to be considered. I have one case that I operated on nearly two years ago, which seems to approach a radical cure. This was a case of true hernio-laparotomy. The internal ring was carefully sewn together, the floor of the inguinal canal was curetted and closed by buried sutures which included the external ring, the superficial surfaces continuous with the abdominal wall being brought together with silkworm-gut. The abdominal cavity was cut off at once and coaptation was so perfect that it tolerated the patient's tearing off all his dressings, walking down stairs and sitting on the front steps in the early morning of the fourth day. When I last saw him he was doing active work and was not wearing a truss.

The closing of the canal can be done, if so desired, by retention of the sac in the upper portion of the canal, using any of the methods suggested. In old incarcerated cases the adherent sac can be separated from the surrounding tissues, leaving a good surface for union, while the sac can still be retained at the internal ring, its serous surfaces simply in contact, or by the purse-string method. The open treatment, the value of which is still doubtful, can be tried. If the abdominal walls have been divided, care must be exercised to bring into apposition the peritoneum and transversalis fascia, also the superficial fascias that make Pou-

part's ligament. The latter procedure is a necessity for strength, the sutures entering well into the pubic side to hold the divided ligament firmly together. If this is well done, when union has taken place the ligament can be readily defined and its relations are found to be continuous. Drainage of the pelvis is a necessity if exudation is apt to occur.

Extracts from Tubercule Cultures.

In a paper read at the Boston Society of Medical Sciences, January 27, 1891, and published in the *Boston Medical and Surgical Journal*, February 19, Dr. J. A. Jeffries says: I thought it might be of interest to report a few of my results with extracts of pure cultures of the tubercle bucillus. I began a year ago to make extracts and study their effects on guinea-pigs, my ultimate object being to produce immunity or find some form of treatment. At first I used alcohol (absolute and dilute), ether, chloroform and benzole, and found that my results were very variable, not regular. After this, in the early part of last summer, I began to prepare glycerine extracts, reasoning from the power of glycerine pepsin extracts. With glycerine I soon found that more or less definite reactions could be produced by large doses in healthy guinea-pigs. There would be swelling at the point of injection, evident discomfort, an increase of urine and at times fever, etc.

Owing to sickness in my family nothing more was done until after Professor Koch's first publication. I at once found that my glycerine extracts produced a much more marked effect in tuberculous than in healthy guinea-pigs. The former, after a dose of half a cubic centigram, would in the course of a few hours become very sick, huddle up in a corner with hair on end, shiver, and in some cases pant. Apparently the amount of urine was increased. Tuberculous guinea-pigs, while in the reaction, could be laid down anywhere and did not run away.

All my animals, both those inoculated with the extract alone and those first poisoned with pure cultures of the tubercle bacillus were then put under like conditions to note results as to longevity. Unfortunately a bull-terrier made a raid on my guinea-pigs during the latter part of December, and again on the 8th of January, killed most of my control animals, and thus ruined the experiments as to final results. So that all I can affirm is that some of my glycerine extracts of about forty-five per cent. final strength, allowed to stand at a temperature of 37½° C. for one week, contain a substance which causes a much more marked reaction in tuberculous than in healthy guinea-pigs; and that for two or three weeks after, the former appeared better than the simply tuberculous control animals.

I have not, of course, got far enough to say if such an extract will invariably work, or to what extent it will mitigate the action of the bacilli. Nor do I yet know how old a culture would be the best medium to grow it on, nor if the extract should be made neutral or slightly acidified. I might add that I found no signs of tuberculosis in a guinea-pig which had received one and a half cubic centigram of my extract in divided doses, and was then inoculated with tubercle culture in the abdomen. Too much weight cannot be laid on this, however, as the animal was very badly crushed by the dog eighteen days later—other guinea-pigs inoculated in the same way with cultures died of tuberculosis in about a month.

In closing, I would state that this is only read in view of Professor Koch's latest announcement as printed in the newspapers of January 15, from which I should judge that, working in somewhat the same line and stimulated by his first article, I have got something on the same principle, but am not sure, as I have been unable to procure an atom of the paratoloid for any purpose.

Vaccination in France.

The London Medical Recorder, February 20, 1891, says: The French Academy of Medicine is just now the scene of a struggle between those who are in favor of a law making vaccination compulsory, and the others who think that the present permissive system goes as far as is consistent with personal liberty. The general in command of the "volunteers," that is to say, of those who object to compulsory protection, is no less an authority than Professor Léon Le Fort, and last week he made a vigorous rally from behind his entrenchments, and, with heavy artillery in the shape of arguments, he prevented the further advance of the attacking forces. There are several points in Professor Le Fort's address which merit attention, especially as the matter is at

present under consideration in this country. First of all—and the news will come as a surprise to those who have been in the habit of regarding France as being at the prow of civilization—all statistics based on the mortality-returns, from the different diseases, must be incomplete, and therefore misleading, for the cause of death is only recorded for statistical purposes in the more important French towns, and, presumably, not at all in the rural and smaller urban districts. What the total annual mortality from small-pox in France may be, can, therefore, only be matter of conjecture. Still, the Professor admits that it is certainly higher than it ought to be or need be. Another fact, hardly to the credit of French provincial authorities, is, that nowhere outside Paris is any attempt made to isolate the sufferers from small-pox. He is therefore compelled to fall back upon the Paris returns, and these show that the mortality has been steadily diminishing, from 32 per 100,000 inhabitants, during the period 1865-76; 55 per 100,000 in 1880-7; to 5 per 100,000 in 1889. The returns of the Small-pox Hospital at Aubervilliers testify to the same diminution, the admissions and deaths having been as follows:—

1887 . .	1,400	admissions . .	215 deaths.
1888 . .	1,079	" . .	152 "
1889 . .	706	" . .	63 "
1890 . .	363	" . .	37 "

There are no available means of ascertaining the proportion of cases of small-pox per 100,000 inhabitants in the country; still less the proportion of deaths to cases of infection. We are, however, told that country doctors have the greatest difficulty in procuring lymph and the people have the greatest difficulty in getting vaccinated, even supposing they were so disposed.

Let us compare these figures with the German statistics. It must be borne in mind that vaccination has been compulsory throughout Germany since 1835, and in some parts since 1815. The returns are as follows:—

In 1834 . .	54	deaths per	100,000 inhabitants.
" 1836 . .	19	"	"
" 1847 . .	9	"	"
" 1856 . .	7	"	"

In 1865, the war led to a relaxation of the stringent rules in respect of isolation, and forthwith the number of deaths from small-pox jumped up to 46 per 100,000, and in the following year to 62. During the Franco-German war, small-pox was imported into Germany by the returning soldiers, and more particularly by the French prisoners of war, and the mortality from variola in 1871 attained 59,839, and 77,000 in 1872, equal to 233 per 100,000 civilians, and 31 per 100,000 of the military population. In 1874, the vaccination law was consolidated, and a vaccination service founded for the supply of lymph, and by 1877 the number of deaths (810 in 1876) had fallen to 88. This level, however, was not maintained, for in 1882 the figures had again risen to 1,007. Thereupon the German Government enjoined more stringent measures for isolation, and then the downward tendency returned, and in 1886 the number of deaths was 140 only.

In England, the mortality in 1885—a time when vaccination had long been in full swing, but when isolation was not seriously enforced—the number of deaths from small-pox in London alone was 1,419. In 1886 the number fell abruptly to 24, in 1888 to 9, and in 1889 to 1 (!). This diminution coincided with the introduction of isolation on a large scale, which reached its apogee with the law for compulsory notification in 1889.

Professor Le Fort argues from these figures that, though vaccination has an undoubted and valuable influence in affording protection and in mitigating the severity of the disease, the most effective and reliable means of preventing the spread of the disease is rigorously enforced isolation.

While it is impossible to deny the salutary influence of isolation, it seems a trifle inconsistent to object to vaccination as an infringement of the liberty of the subject, while rallying to the principle of compulsory isolation, which is as directly in contravention of personal liberty as any measure well could be. To take a patient, *non volens*, and shut him up for eight long weeks in a hospital, is surely as obvious an attack on his liberty as to insist on his submitting to the trivial operation of vaccination. This question of personal liberty, unfortunately, does not admit of any categorical reply. Different people have different ideas as to what constitutes liberty, and as to what limits, if any, are to be assigned to its play. Still, the great object that we have in view, is to secure cheerful submission to an infliction imposed by reason rather than by law, and if this could be attained by persuasion, instead of coercive legislation, then the choice would be easy.

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The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

PRESBYTERIAN HOSPITAL IN PHILADELPHIA.

An event of unusual importance occurred in Philadelphia January 15, when the Presbyterian Hospital of this city celebrated the completion of its new administration building. With this gift of a rich and generous citizen of Philadelphia—and the filling out of a series of gifts, some very large and some smaller—the Hospital has come into the possession of a magnificent series of buildings, fitted with every appliance necessary for a first-class hospital. In many respects, it might be taken as a type of what is best in the development of the Hospital idea in this country; and happily it is only a type of many similar institutions which, bearing the name of some denomination of the Christian Church, extend their charity to all sufferers of every name and every condition.

The benevolence and the beneficence of institutions like the Presbyterian Hospital can hardly be over-estimated. Medical men, more, perhaps, than any others, know how far-reaching is the good done by gifts to such an object. Those who live in cities know especially how great is the difference between what can be obtained by the sick and injured poor in their own houses, and what they get in such a Hospital as this, as well as how much to them it is to be spared the painful alternative of staying at home or going into the Almshouse Hospital, no matter how well that may be managed—as is the one in this city. For this reason, we may be glad that the Presbyterian Hospital in Philadelphia has been so prosperous, and seems likely to be more prosperous and more useful as time goes by.

PATHOGENESIS OF TETANUS.

The immense strides made in the science of bacteriology during the few years of its existence and development are well illustrated in the study of the etiology and pathogeny of tetanus. In 1885, Nicolaier demonstrated that fatal tetanus could be produced in mice, guinea-pigs and rabbits by subcutaneous inoculation with superficial layers of earth, a slender bacillus being found both in the earth and at the site of inoculation. In 1886, Rosenbach found the same bacillus in wounds in man in cases of tetanus as a result of injury or of extreme cold, which reproduced the disease in inoculated guinea-pigs and mice. It was not, however, until 1889 that Kitasato, in the laboratory of Koch, succeeded in isolating and cultivating the bacillus, while but a few weeks ago from the same source emanated an announcement as to the conferring upon guinea-pigs of immunity against tetanus.

Le Bulletin Médical, February 1, 1891, contains a highly interesting paper on the pathogenesis of tetanus, by Drs. Vaillard and Vincent, presented at a meeting of the Académie des Sciences, January 26.

Inoculation of animals with pure living cultures of the bacillus of tetanus is always followed by tetanus, but, contrary to what is observed in men and animals spontaneously infected, the pathogenic agent does not multiply at the site of inoculation in the blood or in the organs of the body. This peculiarity is in apparent contradiction to the prevailing notions concerning diseases of parasitic origin, the evolution of which is correlative of the pullulation of the pathogenic organisms. The explanation lies in the fact that inoculations of cultures of the bacillus of tetanus are active only by the presence of the toxine which they contain. The animals succumb to the intoxication produced by the poison elaborated by the bacilli, and not as a result of the growth and development of the organisms in the tissues. This may be proved in two ways. If a number of animals are inoculated with a living culture, and an equal number with the same dose of the culture sterilized by filtration through porous earth, all die after the same interval. If, on the other hand, a susceptible animal, such as the guinea-pig, be inoculated with even considerable quantities of pure cultures of the bacillus of tetanus, deprived of all traces of toxine, tetanus does not develop. Thus, the bacillus or its spores in a state of purity, without toxine, does not produce tetanus when injected into the tissues of a healthy animal, but the animal dies if inoculated with the products secreted by the wound in a patient having tetanus or contained in tetanigenous earth. These results are not contradictory, but depend on conditions which favor or retard infection.

If an ordinary micro-organism, such as the bacillus prodigiosus, be associated with the spores of the tetanus bacillus, freed from toxine, tetanus can be provoked. Another means, not less certain, is to expose an infected wound to the impurities of the air. This can be demonstrated by introducing beneath the skin a small bit of sterilized cotton, impregnated with some spores, freed from toxine. The wound is soon invaded by adventitious microbes and may suppurate. Fatal tetanus soon supervenes. We have here reproduced the conditions of natural infection. Light is thrown on the part played by the association of micro-organisms in the pathogenesis of tetanus. A new point in the history of diseases of parasitic origin is established.

The activity of the pathogenic germs already known is greatest in their pure state. The primary condition in experimental study, hitherto, has been the perfect isolation of the virus, and its inoculation in a state of absolute purity. This is not the case with tetanus. The pure virus is without effect. Impure, however, it is pathogenic.

The microbe of tetanus is incapable of vegetating in the tissues of a healthy animal, but it pullulates if simultaneously another microbe, which may or may not be pathogenic, is introduced with it. This explains the tetanigenous power of earth, rich in microbes of many species, all of which, however, do not favor the development of the bacilli of tetanus in wounds. Other conditions may facilitate infection. Thus, tetanus may be produced by inoculating an animal even tolerably resistant with a mixture of spores, without toxine, and a solution of lactic acid or a few drops of trimethylamine. The action of certain chemical agents upon the tissues is favorable to the development of the germ, which, without this association, would be inactive. The result is the same if the spores are introduced into a contused muscle. The bacillus of tetanus or its spores does not provoke tetanus in a healthy animal, when injected in a pure state, without toxine, because of the action of certain cellular elements or phagocytes. This may be studied in the anterior chamber of the eye or in the subcutaneous connective tissue. Interference with the protective action of the phagocytes favors infection. Thus, lactic acid repels the afflux of leucocytes, permitting the

spores to vegetate and the bacilli to elaborate their toxine. The bacillus prodigiosus, on the contrary, attracts the leucocytes, engages their activity, diverting it from the tetanus spores, is taken up by them, while the dangerous agents germinate and secrete the fatal poison. In the case of natural infection the phagocytes are able to exert their prophylactic influence only at the beginning of the conflict with the invading microbes. Finally, as the bacilli elaborate their toxine, the phagocytes are overcome.

TRAUMATIC NEUROSES.

In connection with the case of traumatic neurosis published in the REPORTER, March 21, 1891, it is interesting to note that Bitot and Lamarque, residents of the Hospital of Bordeaux, reported, according to *Le Progrès Médical*, February 14, 1891, a case of what they call hysteria in a man, after a fall into the hold of a vessel—a distance of over sixty feet. The attack began with disturbances on the side of the face, which were rather hard to understand, but it developed as glosso-labial hemispasm, or hysteria. He had also habitual stigmata, hemi-anasthesia and contraction of the field of vision. The patient fell upon some casks, which he struck hard with his heel. This was soon followed by hyperesthesia in the heel, which was attributed to hysteria. An interesting feature of the case is the fact that the hysterical manifestations disappeared in a few months, which does not often happen in traumatic hysteria, and that the patient was a person predisposed to manifestations of this kind, having had nervous ancestors, and having, himself, always been an odd and excitable man.

Recent investigations on this subject will probably throw some light upon the strong and only obscurely-understood manifestations of nervous disturbances after railroad accidents, and accidents which simulate railroad accidents in their principal features. Some difficulty in these cases is experienced from the fact that many of the cases have associated with them a moral element, depending upon the possibility of securing damages from corporations in proportion to the real or apparent severity of the consequences of the injury; but those who have studied the subject carefully seem to be practically unanimous that violent physical shocks make some impression upon the nervous part of the human system, which may show itself in very remarkable ways. Dr. Shipps's case in the REPORTER—referred to above—was regarded as one of temporary insanity, and so, no doubt, it was in one sense of the term; but a more careful classification would probably place it with what are now called traumatic neuroses. Many such cases have been reported recently, and when attention is generally attracted to the way in which the subject is now regarded, it is probable that more will be put on record, and that the means for securing a good understanding of the matter will be increased.

EXCISION OF CHANCRES.

The distinct and different individuality of chancre and chancroid is a comparatively modern doctrine, but it is, to-day, almost universally accepted. There are, however, some prominent syphilographers who still claim the unity of these two lesions, so that any observations in regard to them from reliable sources are worthy of careful consideration. Since about fifteen years ago it has been believed, by certain syphilographers, that early excision of the chancre will prevent the subsequent development of syphilis. The determination of this point is a matter of the highest therapeutical importance. The *Centralblatt für die Medicinischen Wissenschaften*, January 10, 1891, contains an abstract of a paper by Neumann, the eminent syphilographer and dermatologist of the Vienna University, in which he details the results of auto-inoculation of syphilitic patients with the secretion from the primary lesion. If, in from

three to five weeks after infection, inoculation with the secretion of a non-suppurating chancre is followed by any result, which is not always the case, there appears in the course of a week a circumscribed redness which develops into a papule shortly before the appearance of constitutional manifestations. The papule grows larger and firmer with the progress of the eruption, recedes with this, following the course of an ordinary lenticular papule; while the primary lesion grows smaller and softer at the time the eruption appears. Nor does the inoculation-papule, like the chancre, occasion swelling of adjacent lymphatic glands or give rise to the development of firm lymphatic cords or to the formation of crater-like ulcers of cartilaginous hardness. These papules cannot be considered identical with the primary lesion, but as manifestations of constitutional syphilis, as the result of irritation, to which syphilitic subjects react with peculiar readiness. If the inoculation is made with the pus of a chancroid, in three days a pustule forms, with an erythematous areola, beneath which a deep ulcer appears, the base of which becomes indurated in a degree in proportion to the intensity of the infection. The same result, however, may be obtained with the pus from the pustules of acne, eczema or scabies.

The conclusion to be drawn from these observations is that syphilis cannot be aborted by excision of the primary sore. Results of a positive nature, as published, must depend upon errors in diagnosis.

Book Reviews.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the Reporter.]

GUIDE TO THE PRACTICAL EXAMINATION OF URINE. By James Tyson, M. D., Professor of Clinical Medicine in the University of Pennsylvania, etc. Seventh edition, revised and corrected. 7½×5½ inches, pp. 255. Philadelphia: P. Blakiston, Son & Co., 1891.

The unimpaired popularity of Dr. Tyson's book on examination of the urine is demonstrated by the regularity with which one edition follows another. This popularity is both deserved and insured by the fact that to the original merit of the book has been added a constant care to keep it fully up to the state of knowledge in regard to the subject, so that each new edition is better than the last. The result is that the book is without an equal—we believe—in the English language for usefulness to students and practitioners. For the former it is almost a necessity, and for the latter it may be a most valuable aid.

In spite of the advanced teachings now given on urine analysis and examination in the first-class medical schools, there are still many physicians who know almost nothing of the subject and who might profit very much by getting and studying a plain and practical book like the one before us. To such physicians and to all students we heartily recommend Dr. Tyson's admirable manual.

POST-MORTEMS; what to look for and how to make them, with sections on Infanticide, Poisons, Malformations, etc. By A. H. Newth, M. D., London. Edited, with numerous notes and additions, by F. W. Owen, M. D., Demonstrator of Anatomy in the Detroit College of Medicine. 12 mo, pp. 136. Detroit, Mich.: The *Illustrated Medical Journal* Co., 1885. (?) Price, $1.00.

This little book begins with directions for the external examination of the body, then follow sections on signs of death from violence, poisoning, etc., and on the internal examination of the body. The latter section is naturally divided into sub-sections containing directions for the examination of the organs of circulation, respiration, digestion, etc., and brief descriptions of the *post-mortem* appearances of the organs and tissues in disease.

The book contains a large amount of useful information, but the matter is so condensed and the descriptions are so brief, that one gets from reading them no helpful picture of pathological anatomy, and no insight whatever into disease-processes as they appear after death.

Literary Notes.

—F. C. W. Vogel, the well-known publisher of Leipzig, announce the appearance at this time of a new journal of neurology called the *Deutsche Zeitschrift für Nervenheilkunde*, six parts to make a volume and to cost about 15 marks. The editorial management is to be in the hands of Drs. Erb, Lichtheim, Schultze and Strumpell. Their preliminary announcement indicates that the new journal will be conducted upon lines which cannot fail to make it a most valuable addition to medical literature.

Notes and Comments.

New Method of Treating Enlarged Prostate.

In a paper published in the *Edinburgh Medical Journal*, March, 1891, Dr. Marotti said: To effect a cure of ischury from prostatic strictures one must understand and meet the diseased condition which produces the enlargement. In prostatic strictures the ischury is occasioned by a mechanical ob-

stacle to the emission of the urine. Now, the therapeutic direction must follow two indications—*Firstly*, To increase the expulsive power, so as to overcome the obstacle; *Secondly*, to remove, or at least to lessen the obstruction, so as to restore the regular passage of the urine. The surgeons of all times have endeavored to carry out the second, rather than the first, of these two questions, and have thought of many different ways. The apparatus invented by Dr. Bottini, of Pavia, completely carries out the idea of making an artificial passage for the urine in the body of the same prostate. The passage of the urine being restored, hypertrophy of the prostate does not any longer entail danger to life, therefore it is useless to take away an organ which, although abnormally enlarged, yet does not affect the general work of the entire body. The therapeutic idea is not that of melting or otherwise destroying the prostate, but that of making a new passage for the urine, to replace the passage which has been obstructed by the abnormal enlargement of the gland. The way of fusion and incision of the prostate by thermo-cautery in such conditions seems rational both as to its immediate effects and as to its ultimate consequences. We need not only to divide the prostatic growth, as the prostatic incisor of Mercier does, but also to keep it open, making at the same time an aperture inside, which will not be quickly closed up, but leaves a permanent groove through which the urine can flow.

The instrument of Dr. Bottini resolves the problem of the practical application of such an idea. The problem was how to heat a certain portion of the instrument, so as to bring it in front of the diseased enlargement which is to be treated, limiting the caustic effect to burn a particular spot, without injuring the urethra and the bladder.

After long and diligent experiments on dead bodies and on living animals, Dr. Bottini succeeded in making an instrument which answers thoroughly the object proposed. The "cauterizatore termo-galvanico" is composed of a metallic tube resembling the catheter of Mercier, internally divided into four compartments for the passage of the conducting electric wires, and the tube for the water, which, entering into one of the canals, runs to its extremity, then passes to the other canal and flows out at the free end, keeping the whole instrument at a constant low temperature. The conducting wires end in two little plates, one-third of a centimeter broad and two centimeters long, placed parallel to each other at a distance of one millimeter, and joined at the bow towards the beak of the instrument, from the curve of which they are separated one centimeter. These plates must get heated to a dull red, the only color which insures destruction of the tissues without causing a single drop of blood. The flow of cold water, keeping all that part of the instrument constantly cold, so that it may not have a caustic action, prevents the epithelium and the mucous membrane of the bladder from being injured, while cauterization of the part of the prostate is being effected.

It is always better to accustom the patient to the use of the instrument before the cauterization, so that its introduction may be easily and quickly done, and the enlargement may be reached at once by applying the cautery exactly to the designed spot. The rule of accustoming the urethra to the passage of the "cauterizatore," so that the instrument may slip by its own weight into the bladder, as Civiale happily expresses it, "C'est l'urethre qui doit avaler la sonde," and so that we can bring the heated portion against the part to be destroyed, is of vital importance. As the patient has been placed in the position used for lithotripsy, unless the bladder be completely empty, we need not inject water. The operation is not painful. Dr. Bottini uses chloroform only occasionally; nevertheless we must insure that the patient will be kept still during the operation, otherwise by a sudden movement the instrument might get displaced, and come against parts which ought not to be touched.

The operative technique consists of three parts:

Firstly, We introduce the instrument, and place the cautery against the part of the enlarged prostate to be burned.

Secondly, We get the cautery heated, and we cauterize to a sufficient degree.

Thirdly, We withdraw the instrument.

In regard to the first, we introduce the instrument into the bladder according to the classical rules prescribed in urethral catheterism. Then we must turn down the beak, as we do in the methodic exploration of the fundus of the bladder, and pulling the shaft so as to hook the neck, we may carry the cautery against the proper spot. If any doubt arises, the position of the instrument

may be ascertained by a finger introduced into the rectum. The instrument being properly placed we allow the water to come in, which can be done by suspending a common pail, or an irrigator of Esmarch, at a certain height, capable of holding six or eight liters of water, at a temperature of about 40° to 50° Fahrenheit.

The battery which Dr. Bottini uses is a Bunsen's, with two liquids, in the improved manner of Pischel, and lately again improved by Dr. Bottini, by the introduction of the accumulators, as he has fully described in his article in the *Lancet* of September 20.

The heating of the cautery must not exceed the dull red; if it does exceed this, and becomes white, the tissues will be too quickly destroyed, and most probably hemorrhage will ensue.

With repeated experiments on dead bodies and on living animals, Dr. Bottini obtained, in one minute, by the cautery being heated to the red color, an eschar about the thickness of a centimeter, and the action being prolonged for another minute, the thickness has become doubled, when he could raise the temperature by one degree, changing the commutator of the battery.

To insure the eschar being formed as indicated, the heated portion of the instrument must be placed against the part to be burned, raising the shaft and bending it gradually, so that the resistance of the diseased tissue having been overcome the beak can be embedded in it. We must then stop the further production of heat by shutting off the current, and let it remain for two or three minutes, so as to give time for the plates to cool, so as to render harmless the withdrawal of the instrument, which will be done in a manner the reverse of that used when it is introduced. We do this in order to prevent the risk of the eschar being brought away with the withdrawal of the instrument.

For the after-treatment we use the soft catheter of Nelaton, always provided that the patient cannot pass water by himself. Dr. Bottini wrote me that a few days ago he had to operate on an old man, suffering from prostatic ischury for more than five years, who after twenty-four hours from operation was able to pass water without artificial assistance. The eschar is completely gone by the tenth, twelfth or fifteenth day.

Dr. Bottini has operated after this method on fifty-seven cases, two of which ended fatally; these, however, were during the early days of the operation, before the instruments had been brought to their present state of perfection. In thirty-two cases a perfect cure had been obtained, in eleven there was an improvement, and in only twelve was no benefit observed. These results in an affection which was so rebellious to ordinary treatment, form a powerful argument in favor of the method; and the author hoped soon to see it adopted more generally by surgeons than it had yet been.

Who Owns the Prescription?

In a paper on the subject of prescription ownership, read before the Philadelphia College of Pharmacy at the Pharmaceutical Meeting, January 20, and published in the *American Journal of Pharmacy*, February, 1891, Mr. Joseph England asks: To whom, then, does the prescription legally belong? To the physician? Certainly not. He has been paid for all services rendered. To the patient? No; for in his recovery to health he has received all that he paid his medical adviser for. To the pharmacist? Yes; by every right of custom and law, provided he has accepted it under certain conditions. If the patient makes a request for its return on presenting it, the pharmacist has one of two lines of action before him. He must either refuse to compound it under such conditions, or express a willingness to compound it and give a duplicate copy. If the latter proposal be refused, he should return the original prescription without compounding. On the other hand, if the prescription is committed to his hands with no primary request for its returnal after being filled, and he has affixed his marks of identity and compounded it, he should retain the original copy as legal evidence that he has prepared such a prescription.

As showing the legal value of a prescription it may be of interest to state that Mr. Robert England informs me he has been subpœnaed in three cases within the last three years to produce certain original prescriptions for the purpose of: 1, to prove attendance in a suit for medical services. Suit was won. 2, to prove that a physician used drugs for malpractice. Physician convicted. 3, to prove that a medical student illegally practiced medicine. In this latter case, the patient dying and the student being unable to give a certificate of death, the

case was examined by the Coroner, and when confronted with the prescriptions confessed guilt. In each instance, however, the legal authorities returned the prescriptions, thus tacitly admitting their ownership.

But this whole question of prescription ownership, to my mind, is essentially one of law, and viewing it from that standpoint, it presents some most interesting features. I have been fortunate in securing for this afternoon's meeting an expression of opinion from that eminent authority on civil law, Richard C. McMurtrie, of this city. He writes me as follows:

Bullitt Building, January 15, 1891.

Dear Sir: You ask who is the owner of a prescription, the physician who writes it, the patient for whose use it is written, or the apothecary to whom it is handed to compound?

Evidently the only dispute can exist in a case in which the physician and the patient have parted with the possession of the paper, and it has lawfully come into the hands of the apothecary, at the instance of the patient.

The universal practice appears to me to point where the title is for all purposes but one. I presume it is the custom to refill a bottle with a prescription indicated on the label. The patient is not required to purchase a new prescription every time he wishes the order filled—and this appears to me plain, from the consideration that he could secure this by copying the paper before using it.

Moreover, he has paid for the composition and skill required for that purpose, and the delivery to the apothecary is for a particular object, and there is in that transaction nothing implying a transfer of property in anything by the patient to the apothecary.

But the practice certainly is for the apothecary to retain the documents. I presume no one ever heard of a prescription being returned with the dose to the patient.

It is obvious there is nothing indicative of a sale or transfer of title on that footing in this transaction. There is something analogous in respect of a check. The return of these instruments arises out of distinct considerations. Accepted bills are never returned to the drawer if paid.

Then there is a consideration which I consider conclusive, seeing that the thing is open to a contract, and the parties have chosen to make none. If under this view of the case the usage is not of itself conclusive, I think the apothecary has the right to retain, to warrant himself, if a question shall arise, as to correctness of conduct.

I may add the claimant must always show his title—if the title be in equipoise he must fail.

It also occurs to me that this paper is merely a substitute for a verbal direction, and no doubt there are multitudes of verbal orders filled that might be written.

On the whole, I should think there ought to be no doubt that the apothecary may, if he sees fit and is foolish enough to run the risk, put the paper in the fire. There can be no half-way measure—he either owns it absolutely, or not at all. There can be no duty to produce it for inspection, or to give copies, while it would be silly to refuse to do so when reasonably demanded.

It is very unusual in this country to look to the consequence of a rule. It may be well to do so. If the patient is the owner—he may at any time within six years demand the paper, and if it is not surrendered, sue as for a tortious conversion of his property. If he can't do this he certainly has no title. I would ask if executors ever inquired for prescriptions given the testator; if they belong to the testator, they are assets.

R. C. McMurtrie.

Paroxysmal Tachycardia.

Dr. H. C. Wood, in the *University Medical Magazine* for March, presents the history of a case, in a physician, of a perplexing cardiac disturbance to which he has attached the name, tachycardia. The affection is one of several forms of "cardiac nerve storms" which may or may not be associated with organic lesion of the heart; and this lesion, in turn, may or may not be essential—it may, for example, be trophic or secondary to a nerve lesion, as in the cases reported by Teissier, in which the aortic valves were found to be punched out as with a perforating ulcer. Whether this trophic explanation be accepted or not, Dr. Wood has no remaining doubts that there are cases of violent nerve storm, accompanied with excessive pain—nerve storms similar in character to those that constitute the "gastric crises" of posterior sclerosis—in which no lesion of the valves

can be discovered; and these cases differ also from the paroxysms of true angina. Dr. Wood is inclined to restrict the use of the term tachycardia. In accordance with this etymology, it could be made to apply to any case of rapid action of the heart. But he regards it as fortunate that there has not yet been any very frequent use of the word, sufficient to affix to it any settled meaning, and he suggests its limitation to those diseased conditions, marked by violent action of the heart, that are not dependent on organic cardiac disease, or on febrile excitation, or on a general constitutional affection, such as exophthalmic goitre. He proposes the restriction of the name tachycardia to cases in which very violent action of the heart occurs without obvious reason. The greater number of these cases resolve themselves into the following three classes: (1) paralysis, centric or peripheral, of the pneumogastric or inhibitory nerve; (2) cases of reflex disturbance, as from the irritation of a biliary calculus or of the sexual organs in the female; and (3) those in which the affection is a neurosis, as when it is due to hysteria or allied conditions, or to exhaustion from privation, or to fright, or to the too rapid ascent of flights of stairs.

Carrying the distinction still further, Dr. Wood places in a class by themselves certain rare cases of cardiac motor-nerve storms to which he applies the title of *essential paroxysmal tachycardia*, several of which cases have been found by him in the contributions of Nothnagel. In the most striking of these cases, the patient was subject to violent action of the heart that came on abruptly, even during absolute quiet, without marked pain, but with some sense of anxiety. In a moment the pulse would go up to 180, the heart sounds meanwhile remaining normal. The duration of the tachycardial paroxysm varied from a few minutes to several hours. In the instance of the physician, already referred to as Dr. Wood's typical patient, the pulse-rate rises as high as 160 if the patient remains at rest, and as high as 200 if he exerts himself, as in walking. The access of the paroxysm is abrupt, and so is its cessation. During rest the disagreeable sensations belonging to the attack are hardly more than slight pain and a sense of thoracic fulness. The patient, Dr. H. C., is now over eighty-five years of age, and since about his sixtieth year has had these paroxysms, on an average, once in every three weeks, although he has had as many as four in a month. This was his experience prior to 1888; latterly the attacks have been more frequent. The paroxysms may be brief and they may be broken up by some medicament after a few minutes—but various forms of treatment tend to lose their efficacy after a certain number of trials—or may be protracted to ten or even twenty-six hours. The patient has been examined frequently for cardiac lesion by various physicians of high rank, both during the attacks and during the intervals, but at no time has any murmur been found. His health has continued good, and now, in his eighty-seventh year, he continues to be sufficiently vigorous to be able to ride about in his carriage for hours at a time, and even to walk considerable distances. The attacks have become very frequent, occurring during the last year almost every day, but they are often terminated promptly by the drinking of a glass of cold water. The pulse now rarely rises above 135, there is little distress, and he can even write a letter in the height of a severe paroxysm without the handwriting showing any tremulousness or otherwise giving evidence that it is the work of a tachycardiac old man.

In conclusion, the following is Dr. Wood's definition, given in his own words, of essential paroxysmal tachycardia: "The definition of the disease would be that of a recurrent paroxysmal neurosis in which attacks of excessively rapid heart action occur without obvious immediate or disposing cause, and without pronounced pain or excessive cardiac distress, the pulse rising to 160 and upward, the sounds of the heart remaining normal, and it being frequently possible to arrest the attacks by drinking a glass of cold water and certain other procedures of apparently trifling import, the disease having apparently no tendency to shorten life or to develop organic disease, and being entirely compatible with great mental and physical activity." In regard to the influence over this affection of so simple an act as the swallowing of a small amount of cold water—which is probably a characteristic phenomenon of the trouble, since it has been noted in nearly all the fully reported cases—Dr. Wood refers to observations by Dr. S. Meltzer, which show that swallowing is attended with a loss of tone in the vagus centre, and with a consequent cardiac inhibition, but it is also possible

that the swallowing of cold or hot liquid begets a stimulus to the cardiac centre by an irritation of the peripheral gastric filaments, since it is well known that an irritation of the abdominal nerves is competent to inhibit the heart in a reflex way; and the temperature at which the liquids are swallowed is important, since, if the water, when taken by the patient, is only moderately cold, much larger quantities of it are required.—*New York Medical Journal*, March 14, 1891.

Open and Subcutaneous Tenotomy.

In the *Medical Chronicle*, February, 1891, is an abstract of an article by Sabatier on "Open tenotomy and subcutaneous tenotomy," published in the *Lyon Méd.*, December 28, 1890, which says that since the introduction of antiseptic surgery there has been a tendency to abandon subcutaneous tenotomy in favor of tenotomy by means of an open wound, and that Sabatier discusses the reasons for and against each method, taking in turn the tendons which are most often divided.

The sterno-mastoid.—The reasons given by those who favor the open method are two: The absolute security against accidental injury of vessels, and the ease with which one can obtain complete division. In support of the first reason, three cases of wounding of large vessels, such as the internal and external jugular veins, are quoted. In addition, abnormal vessels may be injured. In support of the second reason it is argued that there are various forms of torticollis, the most simple being limited to contraction of the sternal head of the muscle. The clavicular head is, however, almost always affected, and in the more complex forms the levator anguli scapulæ, splenius, trapezius and scalenes. There are also fibrous forms affecting various parts of the cervical fascia. It is in these cases that subcutaneous tenotomy is both incomplete and dangerous.

In reply to these reasons Sabatier contends that the dangers of subcutaneous tenotomy have been exaggerated, and that the open method is unsuitable.

Out of the thousands of subcutaneous sections of the sterno-mastoid only a few cases of wounds of large vessels are known, although he admits that perhaps all have not been published. All danger may be averted by entering the knife at the internal border of the muscle, and fifteen to twenty millimeters above the clavicle, to avoid the horizontal part of the anterior jugular vein as it runs beneath the muscle to join the external jugular. The knife edge must then be turned against the deep surface of the muscle, and the division itself effected by pressure, and not by sawing movements of the blade, counter pressure being made with the thumb on the external surface. By this method of division from behind forwards only the deep aspect of the skin is in danger; if performed from before backwards the vessels may be injured. He therefore concludes that in ordinary cases subcutaneous tenotomy of the sterno-mastoid is not more dangerous with regard to immediate accidents than open tenotomy.

The great inconvenience of the open method is the cicatrix left in an exposed region. Even if it be smooth, it is generally horizontal, and all horizontal cicatrices are more visible than vertical ones. Moreover, it undergoes vertical displacement from below upwards as age advances, so that it may even reach as high as the middle of the neck. If the wound suppurates, or keloid growth subsequently attacks the cicatrix, it becomes much more unsightly.

For this reason, Sabatier's second conclusion is, that in ordinary cases of torticollis, it is preferable to practice subcutaneous tenotomy. With regard to the very complex cases, he believes that nearly all of them can be cured by subcutaneous section, and subsequent continuous extension by means of some mechanical apparatus, but in very exceptional cases open tenotomy ought to be adopted.

Tenotomies of the lower limb.—These are performed in three regions—at the root of the thigh, on the adductors and the muscles attached to the anterior iliac spinus; at the knee, on the hamstring tendons; and at the foot, on the tendo Achillis, and plantar aponeuroses.

At the root of the thigh.—There are no advantages whatever in open tenotomy here, and the subcutaneous method should always be chosen.

Hamstring tendons.—Sabatier advises open tenotomy for the biceps tendon, because one can better avoid the external popliteal nerve. A cicatrix in this region is not of importance, and the division can be made more complete. It is also best for the semi-membranosus and semi-tendinosus, because of the more complete division and the security

from wounding the deep vessels. Inflammations of the knee-joint often spread to the tissues below the knee, and the vessels get distorted and fixed in unusual positions.

After the operation is completed, he leaves the wound open, and packs it with iodoform gauze; sutures should not be used, because after forcibly straightening the limb, the soft parts are extensively lacerated, and a large quantity of plastic exudation is thrown out, which causes tension and suppuration if the wound be firmly closed with sutures.

Tendo Achillis and plantar aponeuroses.—For the tendo Achillis the subcutaneous method is the best, and the section from the deep surface is the easiest, because the flexion of the foot necessary to make the tendon prominent, also draws it into close contact with the skin, rendering it difficult to pass the tenotome between the tendon and the skin. It is also better to do it from the inner side, because in some cases of club-foot the posterior tibial vessels become tortuous and spread over a large surface, and are thus liable to injury if one punctures from the outer side. Again, in cases of club-foot, the tendon is much more visible and prominent on the inner side, and so more easily divided from that side. With regard to division of the plantar aponeuroses, he thinks subcutaneous section quite sufficient, and condemns the free, open and extensive division advocated by Phelps as being in almost all cases more than is necessary to reduce the deformity.

Laparotomy for Disease of the Liver.

The Paris correspondent of the *Medical Press*, February 11, 1890, says that recently M. Routier related an interesting case of laparotomy for jaundice of a severe type. A nurse in the hospital was seized with severe hepatic colic lasting twenty-four hours. In spite of energetic treatment jaundice set in, the fecal excretions were discolored and the urine almost black. The liver was felt below the false ribs, and the gall-bladder was painful. For a whole month the condition of the patient remained unchanged, and at the end of that time vomiting set in, and the patient became much emaciated. Believing that a biliary calculus was obstructing the bile duct, the surgeon determined to explore the region, and for that purpose laid open the parts by an incision on a level with the inferior edge of the liver. Passing his fingers through the wound he felt the gall-bladder, which did not seem in any way distended, and consequently was not obstructed. He passed his fingers then over the inferior edge of the hepatic organ, but found nothing abnormal. Before withdrawing his hand he felt the head of the pancreas, but no tumor was discovered there. Finally, he closed the wound, and, strange to say, the vomiting, which had been previously uncontrollable, ceased, and in two days afterwards the jaundice paled, and in a week the urine assumed its normal color, and the patient speedily recovered. The speaker could only explain the happy result by the fact that the massage displaced some mucous collections which had obstructed the flow of the bile.

Post-partum Hemorrhage Treated with Caffeine.

Misrachi, in the *Journal de Médicine*, January 25, 1891, recommends the subcutaneous injection of caffeine as more efficient than ergotin in the treatment of post-partum hemorrhage, especially when there has already been much loss of blood, and delay is dangerous. He gives the following prescription.

℞ Sodii benzoatis . . . . . ʒ ijss
Caffeinæ . . . . . ʒ jss-ʒ ij
Aquæ destillatæ . . . . . f ʒ j

M.

Of this solution, a drachm, which contains twelve and a half or fifteen grains of caffeine, is to be injected at once, and subsequently from a drachm and a half to two drachms and a half in twenty-four hours. The solution should always be employed warm.

To Remove Dark Color from Comedones.

The *British Journal of Dermatology*, February, 1891, gives the following prescription of Unna and Leistokow for removing the unsightly "black-heads" which are so often an annoyance to a patient and a trouble to the physician.

℞ Lanolin . . . . . 10 parts
Vaselin . . . . . 20 "
Peroxide of hydrogen . . . . 20–40 "

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Clinical Lecture.

UTERINE HEMORRHAGE.—CORRECT TREATMENT OF FIBROIDS.—ENLARGEMENT OF THE ABDOMEN.[1]

BY E. E. MONTGOMERY, M. D.,
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Uterine Hemorrhage.

Gentlemen: This colored woman, forty-four years old, presents the following history. Her mother died of dropsy, lasting a year before her death. The mother had several children, two of them girls, one of whom had a uterine fibroid removed some time ago, the other, the patient under consideration, has always been healthy. She had two brothers who died of phthisis. Our patient menstruated for the first time at the age of fifteen; the flow was always profuse but painless. She was married at twenty-two, and had a child a year later. The labor was long, lasting thirty-six hours, requiring for its termination the use of forceps. It was two years before she menstruated again. Four years later she had a second labor, again requiring the use of the forceps. She has never had an abortion. Three months ago, at her monthly period, she experienced intense shooting pains, accompanied with marked bearing-down sensations. This lasted several days, and was followed by a leucorrhœal discharge, which persisted until the menses made their reappearance, when she suffered from the same pains. Last month severe flooding from the vagina accompanied these sensations. She has been constipated for a month. She is not emaciated, although her appetite is poor, and her flesh is not especially abundant. Her heart and lungs are normal.

[1] Delivered at the Philadelphia Hospital.

There are certain conditions which will produce the symptoms from which this woman is suffering, but it is best not to arrive at a hasty conclusion.

Although everything at present points to pelvic trouble, do not at once exclude careful study of every organ, however remote. Is the trouble due to local or to constitutional causes? If you should happen to find some local cause which, in your mind, is sufficient to produce the condition present, do not let that fact deter you from studying all other possible sources.

Before commencing treatment, investigate all the sources of hemorrhage from the uterus, or, more broadly, from the vaginal tract. Disease of the uterine mucous membrane is frequently an important factor in these hemorrhages. Long-continued inflammation of this membrane sets up a granular endometritis, even producing polyps, which, in turn, may produce hemorrhage. The flow may be at the monthly periods, being called menorrhagia; or independent of these times, forming metrorrhagia—or simply hemorrhage from the uterus. Again, the walls of the uterus may produce a condition which gives rise to hemorrhage. Growths, which may be fibroid, appear, distend the mucous membrane, and, being supplied with numerous blood-vessels, rupture easily, producing the above phenomena. Malignant disease, involving the cervix or body of the uterus, is frequently a cause of hemorrhage. Degenerative changes following labor or abortion may cause hemorrhage. Imperfect removal of the placenta favors the growth of polypi, which in their turn favor the production of hemorrhage. Disease in the kidneys, liver or heart, the exanthemata, and typhoid or malarial poisoning, have produced occasionally, in their course, bleeding from the uterus. When there is an absence of heart, kidney, or liver trouble, when there is no poison in the blood, no fibroid, no malignant disease, not even inflamma-

tion of the mucous membrane lining the uterus—still there may be disease in the pelvis which is producing the flow of blood. Cellular infiltration of the pelvis, exudations into the tissue of the adjacent parts from extension through the Fallopian tubes, may cause the trouble. The circulation in the uterus is interfered with, and a hemorrhage, passive in character, makes its appearance. Disease of the ovary, especially cystic degeneration, is particularly prone to produce this symptom. In the absence of other apparent causes, it is well to remember this point. The influence of the ovaries upon the circulation of the blood in the uterus is most marked. When this cause is operating, local applications to the uterus will be made in vain. Bleeding from the vagina itself may be the real cause of the trouble, being mistaken for that from sources higher up. A vaginitis may produce this symptom; especially granular papillæ, which are common at the vestibule, may tinge the discharge blood-color.

Women rapidly lose confidence in the doctor who is unable to stop any such hemorrhage. So it is well to study all these cases with the utmost care. With this outline let us take up our present patient. This woman has severe tearing pains, bearing down in character. It is possible that this is due to pregnancy. The presence of menstruation does not preclude this possibility. I saw a case, within a few weeks, which illustrates this. I examined in consultation with another physician, a year ago, a woman who had enlargement of the uterus. This enlargement was fibroid in character, and I decided that it was areolar hyperplasia. With this condition, the woman had increased menstruation. I saw her again a month ago. The uterus was then enlarged, not symmetrically, and it was hard and firm at one point, localization of the fibroid growth having taken place. The hemorrhage had increased in quantity. There was no arrest of menstruation, on the contrary the flow was in excess. Two weeks ago, her physician writes me, she discharged a small fetus. The retained placenta formed the so-called fibrous polypus, to which there was enough blood supplied to prevent decomposition with its unpleasant results. There was no fibroid present; there was distinct thickening of the uterine walls, but no tumor.

Again, in some women, menstruation is increased for the first few months of pregnancy. In this woman, it may be due to a fibroid. If the pedicle is long, it may drop down into the internal os, becoming a valve, causing severe labor-like pains to produce the expulsion of the blood.

Fibroids of the Uterus.

With this introduction, let us return to our patient. She is, as I have said, forty-four years old, colored. There is a marked tendency in the colored race to fibroid enlargements, and less tendency to carcinoma or epithelioma. With the woman on her back, her limbs drawn up to relax her abdominal muscles, I introduce two fingers into the vagina. The cervix is large, hard and fixed, and projects into the anterior portion of the vagina. The uterus is immovable. In the posterior fornix there is a firm, irregular, dense mass which extends into the pelvis. This seems like a fibroid growth; still, we must not decide too quickly. With two fingers in the vagina and the other hand over the abdomen, it is possible with lax abdominal walls to outline the mass thoroughly. Here we find the abdomen hard and tense. In such cases, insist on the use of an anæsthetic. Do not commit yourself without careful search. Bromide of ethyl acts quickly, requires a small amount and is less likely to cause sickness than ether, and its effects pass off speedily, making it the best anæsthetic for office use.

Fibroids in the uterus begin as the result of irritation; there is a simple increase in the nutritive activity in the muscular layer of the uterus. The constituent elements of the normal tissue increase in size, pushing aside as they grow the adjacent tissue. Beginning in the uterine wall, as either a single or a multiple growth, as it develops it remains within the walls or intrudes into the cavity of the uterus, or extrudes towards the peritoneum; its direction varying according to its original position, as it grows in the direction of least resistance. These three varieties are called respectively, sub-mucous or polypoid; interstitial or in the wall; and sub-peritoneal or beneath the peritoneum. The fundus is well forward, the body of the uterus is small, and the mass is posterior, growing either from the back wall of the uterus or as the result of inflammatory exudation at this point. The uterus is more fixed on the right side. This is undoubtedly a fibroid enlargement, extending into the broad ligament. We should pass our finger into the cavity of the uterus to further

determine the diagnosis. This I will not take time to do now.

What treatment shall we pursue? This depends somewhat on the variety of the fibroid. First, the medical treatment would consist, naturally, in decreasing the flow of blood to the uterus. For this purpose strychnia, quinine, ergot, antipyrin, etc., may be tried. Ergot, by its action on the muscular coats of the blood-vessels and its contractile action on the entire uterus, may be of service. But it may drive a fibroid beneath the peritoneum, making it sub-peritoneal. On the other hand, it may force it into the cavity of the uterus and in this way expel it. Again, the circulation may be so cut off by the medication that the tumor may be in danger of sloughing, setting up septic trouble. Treating the mucous membrane locally may be of service. Changing the surface of the uterus cavity, by curetting or cutting partially through the vessels of the region, may cause these to contract, arresting the tendency to bleed. Dilatation or cutting of the cervix may be followed by extrusion of the tumor. Electricity has been a much vaunted agent in these cases; the positive pole being placed in the uterine cavity, the negative on the abdomen. With high currents cicatricial tissue is produced, which in its turn contracts. Cases have undoubtedly been benefited by this treatment, but the results are slight and transient, and the tumor steadily increases unless electricity is constantly applied.

Beside these measures, a radical course can be pursued. If the tumor is in the cavity of the uterus, twisting or cutting it with scissors or the wire *écraseur* will be of service. If the tumor is in the wall of the uterus, and the cervix is undilated, this is not easily accomplished. If the hemorrhages are severe, so that life or health are threatened, the removal of the ovaries may be considered. Menstruation does not always stop with the removal of the ovaries. In the case of this woman's sister, whose ovaries were removed, discharges have not ceased at all. I believe that this result is largely avoided by including the round ligament in the ligation of the pedicle. This increases the pressure on the ovarian nerve, which governs the blood supply of the uterus, and thus tends to reduce hemorrhage. These fibroids cease to grow at the menopause; they even decrease from this time on; but the menopause is generally delayed by their presence. A woman may die from hemorrhage before this period is reached. This woman is forty-four, she is near the normal time for the disappearance of her catamenia; but this disappearance cannot be regarded as a certainty for some years.

Enlargement of the Abdomen.

The next woman presents an obstinate case of vomiting and constipation, for the relief of which many remedies have been tried. The injection of oil high up into the alimentary canal has at last succeeded in bringing away a large amount of hardened feces. Her abdomen is distended, not quite symmetrically, more to the left than to the right. She may have a fibroid, an ovarian cyst, ascites, or be pregnant. In pregnancy there is usually an arrest of menstruation, and the subjective nervous symptoms so well known. The white lines on the abdomen here seen are not diagnostic of this condition. They are present in ascites, obesity, cystic tumor, or any condition by which the middle layer of the skin is stretched. The first step is to inspect the part. Is the swelling regular in shape? In pregnancy it is generally spheroidal with its main axis in the middle line, or rather, generally a little to the right side. In fibroid tumors the abdomen may be symmetrical or a little one-sided. Irregular projections are common. In cysts and ascites there is fluctuation as a rule. In a single cyst this fluctuation is marked; if the cyst be multolocular, it is less noticeable. On palpation a distinctive sensation is experienced. The fibroid presents a hard, dense, resisting mass, firm and irregular in outline. In the pregnant uterus of this size, although not by any means at term, irregular, rhythmical contractions may be felt, which do not easily mislead. Contractions in the abdominal walls do not imitate this rhythmical contraction. The fetal heart sounds can also be heard at this period in pregnancy. Both these signs are present in this woman. That the mass lies to the right side rather than to the left indicates that this is not this woman's first child. The uterus is large and there is a large amount of liquor amnii present, which allows the fetus to float.

—Sulphuric acid often contains traces of nitrous compounds which seriously interfere in the examination of waters. This fact is not as well known as it should be.

COMMUNICATIONS.

SALOL.

BY ALFRED EICHLER, M. D.,
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Salol is one of the recent additions to our materia medica, but its merits are now almost universally admitted. It was discovered and first used by Swiss scientists, in 1886, and since then its use has spread all over the world. It is a white, crystalline powder, obtained by the action of carbolic acid on salicylic acid, therefore being, in chemical nomenclature, a salicylate of phenol. In composition, five grains of salol are equal to about two grains of carbolic acid and three grains of salicylic acid. Therapeutically, its effects are entirely different from those of either agent administered alone, depending on the fact that its constituents are united by chemical union, and represent, therefore, a different body. Salol possesses an odor similar to oil of wintergreen. It tastes like carbolic acid; it is soluble in water only in a very small measure, therefore watery solutions are impracticable. In alcohol, ether and oils, salol is very soluble. Further, it is interesting to know that this substance, although crystalline, cannot be reduced to a very fine powder, because the crystals have a tendency to adhere. The odor of salol may be noticed, after its administration, in the excretions as well as in the expired air. The dose differs, according to circumstances, from 15 to 120 grains a day. It should be remarked, however, that a case has been reported in which a half drachm of salol, administered to a previously healthy person, and distributed in five-grain doses over the day, has produced a severe rash over the whole body, which disappeared spontaneously in five or six days (*Medical Record*, March 3, 1888). A case of poisoning has also been reported, in which a young man had swallowed at once two drachms of salol. The resulting coma was followed by death. At the autopsy, degenerative changes were noted in the kidneys, as might be expected; the harm done was attributed to the carbolic acid contained in salol (*Medical Record*, October 11, 1890.)

As regards the method of administration of salol, it is best dispensed in pills, compressed tablets, capsules or emulsion. For external use lanoline, or a mixture of equal parts of lanoline and olive oil, offers a very good menstruum; if used externally in ointment form, it is usually prescribed in the strength of one part in ten of the ointment base.

Salol may be looked upon as a very efficient antiseptic, antipyretic and anti-rheumatic. When ingested, it is insoluble in the acid gastric juice, but it is dissolved in the alkaline intestinal secretion, being perhaps split up by the alkaline elements of the bile into its original constituents, which are then absorbed and taken into the circulation, the carbolic acid being rendered nonpoisonous by the change into a phenate (carbolate) of soda. This assumption is corroborated by the fact that salol is readily decomposed by weak alkalies like bi-carbonate of soda—a point which should be remembered in prescribing. After absorption and diffusion through the system, the original constituents may be detected in the urine, the carbolic acid imparting the characteristic green color of phenoluria. As salol passes the stomach unchanged, experiments can be made with it in determining the activity of the stomach in propelling food. This test has been taken advantage of in dilatation of the stomach, and is available in all diseases where the motor power of the stomach is thought to be impaired. Of course, physiological tests of this kind depend so much on varying circumstances that definite conclusions can be arrived at only when a sufficient series of control experiments with healthy individuals is also carried out.

The antiseptic effects of salol are easily enough understood on considering that it is composed of two of the most powerful antiseptics now in our possession. As an antipyretic, it acts on account of being a derivative of salicylic acid, which itself has great heat-reducing virtues. Salol, however, is more easily tolerated by the stomach than salicylic acid, as it is insoluble and non-irritant; while the latter is a strong irritant of mucous membranes, and, therefore, cannot be tolerated by the stomach for any length of time in doses sufficiently large to produce good effects. That the salicylic acid is the antipyretic factor of salol is readily proved by the clinical fact that salol acts as an antipyretic only in large doses, twenty to thirty grains, containing from twelve to eighteen grains of salicylic acid. Small doses of salol reduce heat only in a very small meas-

ure. The carbolic acid and salicylic acid, into which salol is separated in the intestine, are eliminated mostly through the kidneys, as carbolate of soda and unchanged salicylic acid. Thus the urine is made antiseptic—a fact which has been taken advantage of in genito-urinary surgery.

The therapeutic action of salol resembles, to some extent, that of salicylate of soda. In comparing the action of the two remedies, much similarity may be observed, with some points in favor of salol. They are both excellent anti-rheumatics, salol, however, acting best in subacute rheumatism, especially when a short course of salicylate of soda has preceded its use. It will lessen the fever quickly, cause the pain to disappear, and the swelling will be reduced. As already mentioned, it acts better in chronic cases than in acute. For this purpose, it should be given in doses of not less than fifteen grains every three hours, preferably in wafer or capsule. Salol is especially efficient in those forms of rheumatism called lumbago. Sciatica, that uncertain disease, a veritable touchstone for medical skill, composed so often of neuralgic, rheumatic and malarious elements, often yields to large doses of salol.

In diseases of the alimentary canal, salol is also very efficient. It acts in the stomach merely as a mechanical antiseptic, similar to subnitrate of bismuth. In the intestine it becomes a full and strong antiseptic. This has been made use of to treat various diseases of the intestine, like dysentery and diarrhœa. It is advisable here to combine salol with other suitable agents. For chronic diarrhœas, in which a cleansing of the intestinal tract may be desirable, it is good practice to order fifteen grains of salol in an ounce of castor oil, to be given at a dose; or, when pleasanter medication is desired, one may prescribe:

℞ Salol . . . . . ℈ii
Ol. ricini . . . . . f℥iss
Syr. rhei . . . . . f℥ss
Pulv. acaciæ . . . . . ℥ss
Aquæ cinnamomii . . . . . q.s. ad f℥iv

M. Fiat emulsio. Sig. A tablespoonful every hour, until the bowels move very freely.

In typhoid fever salol has been used, but with no more success than other remedies. A disease running a regular course like typhoid fever will not mend its ways, or be aborted, under any one mode of treatment. Salol, however, has proved quite efficient to moderate the diarrhœa, and in conjunction with other therapeutic means, like cold ablutions and wet packs, with free stimulation and proper nourishment, it becomes a valuable adjunct in treatment.

Diarrhœa infantum offers a good field for the administration of salol. It is especially useful when the intestinal canal has been severely irritated by the products of faulty digestion. It may be ordered then in small doses, alternating with antacid remedies, like chalk mixture and bismuth.

Affections of the genito-urinary organs are often improved by the exhibition of salol. The most common of all, gonorrhœa, is much more tractable to treatment with salol than without it. The main good is rendered by making the urine antiseptic and unirritating by its administration. It acts thus considerably better than injections of antiseptic substances, being practically an injection from within outward. In treating a case of gonorrhœa with salol, it can be given in conjunction with the balsam of copaiba, usually prescribed. It may be ordered as in the following formula.

℞ Saloli . . . . . ℥vi
Bals. copaibæ . . . . . f℥iss
Syr. simpl.
Mucilaginis acaciæ . . . . . aā f℥iij
Tinct. lavandul. co. . . . . q.s. ad f℥viij

M. Sig. A tablespoonful three times a day, one hour after meals.

Large doses will prove more efficient for this purpose than small ones. The good effects are produced entirely by the action of the antiseptic and bland urine upon the inflamed urethra. Weak antiseptic injections into the urethra from without can also be used at the same time, and will assist in securing a speedy cure. It has been shown that salol, thus used, will shorten the course of the disease materially. Chronic cases improve under judicious use of this agent, if it be used with sufficient persistence. The urine appears, after the ingestion of these large doses of salol, in a much darker color, ranging from olive green to a blackish tint; this is caused by the carbolic acid contained in the urine, and need not be feared. Painful micturition is alleviated early, and the discharge is lessened promptly; in short, the acute inflammatory stage subsides much more quickly with, than without, salol.

In other diseases of the genito-urinary organs salol also deserves a careful trial. In operating for stricture of the urethra, it is advisable to have the patient take it one or two days before the operation, to render the

whole urethra aseptic. Perhaps the infiltration of tissues, so feared after operations in this region, might be rendered innocuous, if salol were given beforehand.

In diseases of the bladder it also proves useful. In cystitis it leads quickly to amelioration of the symptoms, and thus proves valuable in this troublesome and painful complaint.

Salol is of great value in treating different affections of the air passages. As the characteristic odor of salol may be noticed in the expired air, it is quite right to assume that it exerts a local influence besides the constitutional impression. It is of great value in the treatment of acute catarrhal conditions, for the treatment of which it may be combined with various other suitable agents. Terpin hydrate, for instance, acts well thus combined. The two substances can be dispensed in small doses in capsules, and given alternately every two or three hours. If salol alone is given, it will often be found to be acting like a charm. It soothes irritation, stimulates free secretion, and permits the patient to expectorate freely. Patients often remark when salol is given, that the medicine raises the phlegm quickly. It is also recommended in tonsillitis, as it will shorten the duration, besides lessening the fever, quieting the attending pain and relieving painful deglutition. In this affection an emulsion would seem to be the best mode of prescribing the drug.

During the recent invasion of influenza, salol proved of great benefit to the many afflicted. It was quite often prescribed, especially in that form of the disease simulating anginas and catarrhal sore throat. Alleviation of the rheumatic symptoms also quickly followed its use. In the treatment of other infectious diseases, salol has been found useful.

As already mentioned, in typhoid fever salol will assist in procuring asepsis of the intestines. In scarlet fever, it has also been prescribed, and it is believed continued administration of this drug will aid in shortening the duration of the disease, by eliminating the infectious material, besides reducing the temperature.

Externally applied, salol gives excellent results in some diseases of the skin. For a simple erythema, it may be used rubbed up with starch to a dusting powder. The powder form, however, is not very eligible, as salol has a tendency to ball together and form lumps. It is more suited to a paste. As it is white in color, it may be freely applied about the face. In sycosis of the bearded portion, if it is thus applied, it will cause good results. A good formula is as follows :

℞ Saloli . . . . . ʒij
Zinci oxidi
Pulv. amyli . . . . . aa ʒiv
Lanoline . . . . . ʒi

Of course salol may be added to this in any strength, providing the fatty vehicle is also increased. It is entirely innocuous when thus applied, probably not being absorbed through unbroken surfaces, and acting only as an antiseptic protective. The latter quality makes it also an admirable application in burns and scalds. It is then best used by dissolving it in some fatty oil, preferably olive oil, afterwards pouring it liberally over the injured surface, which is to be covered with soft lint.

A summary of all these properties will show salol to be a very useful addition to our materia medica. It is to be regretted that it is, like most other late additions, a proprietary article, imported from Europe and one which our laws prevent us from preparing ourselves; as a consequence it costs more than it would if it could be manufactured here.

SEXUAL PERVERSION AS A PHASE OF EVOLUTION.[1]

BY J. G. KIERNAN, M. D.,
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The hypotheses advanced as to the origin of the sexual passion have been multiform. One just now gaining the ascendency was advanced by Clevenger a little more than a decade ago in the following language: "Dollinger and Drysdale have described fission of the monad preceded by the absorption of one form by another. One monad would fix on the sarcode of another, and the substance of the lesser or under one would pass into the upper one. In about two hours the merest trace of the lower one was left, and in four hours fission and multiplication of the larger monad began." Leidy insists that the amœba is a cannibal, whereupon Michets expresses

[1] Abstract of a paper read at the March meeting of the Chicago Academy of Medicine.

the opinion that each cannibalistic act is a copulative (if the term be admissible) one. Henry Lawson agrees with Michets.

Among the numerous hypotheses as to the origin of the sexual appetite none has referred its derivation to hunger. At first glance such a suggestion seems ludicrous enough, but a little consideration will show that in thus fusing two desires, the meaning and derivation of the primary one—desire for food—is not explained. The cannibalistic amœba may, as Dollinger's monad certainly does, impregnate itself by eating one of its own kind. Innumerable instances occur among algæ and protozoa, of this sexual fusion, appearing very much like ingestion. Crabs confuse the two desires by actually eating portions of each other while copulating. The female *mantis religiosa* eats the head off the male during conjugation. Some female spiders find it necessary to finish the marital repast by devouring the male, who tries to scamper away from his fate. The bitings and even the embrace of the higher animals appear to have reference to this derivation. Association often transfers an instinct in an apparently outrageous manner. With quadrupeds olfaction is most related to sexual desire and its reflexes; but not so in man. Ferrier diligently searches the region of the temporal lobe near its connection with the olfactory nerve for the seat of sensuality; but with the diminished importance of the smelling sense in man, the faculty of sight has grown to vicariate olfaction; certainly the lust of the eyes is greater than that of other special sense organs among bimana.

In all animal life multiplication proceeds from growth, and until a certain stage of growth, puberty, is reached, reproduction does not occur. The complementary nature of growth and reproduction is observable in the large size obtained by some animals after castration. Could the division of an amœba be stopped, a comparable increase in size would be effected. The seeming grotesqueness of these views is chiefly due to their novelty. While a primeval origin for both ingestive and sexual desire seems to have existed, and each seems a true hunger, the one being repressible, and in higher animal life subjected to more control than the other, the question then presents itself: What is hunger? But the reflection serves to show its potency in determining the destiny of nations and individuals, and what a stimulus it is in animated life. Most probably it originated in atomic affinities of inanimate nature.

Later biologists have adopted this theory. Rolph evidently regards the process of fecundation as one of mutual digestion, for he says: "Conjugation occurs when nutrition is diminished, whether this be due to want of light, or the lower temperature of autumn or winter, or to a reduction of the organism to minimal size. It is a necessity for satisfaction of a gnawing hunger which draws the animal to engulf its neighbor—to isophagy. The process of conjugation is only a special form of nutrition which results in a reduction of the nutritive income or an increase of the nutritive needs in consequence of the above-mentioned condition. It is an isophagy which occurs in place of an heterophagy. The less nutritive and therefore smaller, hungrier and more mobile organism, we call the male; the more nutritive, and, as a rule, relatively more quiescent organism, the female. Hence it is that the small starving male seeks out the larger well-nourished female for purposes of conjugation, to which the latter, the larger and better nourished is, in its motive, less inclined.

Westphal has reported an interesting case of perverted sexual instinct in a thirty-five-year-old woman, whose father had committed suicide, and who had been a housekeeper in a boarding-school for girls. She learned with difficulty in school. She had a cleft palate. As a child she had been fond of boy's games and male attire. From her eighth year on she had felt drawn to certain girls. She liked to express her love for them, kissed them and induced them to let her touch their genitals, which from her eighteenth to her twenty-fifth year she had frequent chances to do. When such chances did not occur she masturbated, particularly just before and just after menstruation, picturing to herself the loved girl. She had tried to abandon this habit, but when she attempted to control herself, she experienced a disagreeable odor and taste coming upward from her genital organs. This perverse tendency was exceedingly obnoxious to her and she desired to be freed from it. In her voluptuous dreams she appeared to herself to be a man. Physically there was no variation from the feminine type. The patient had latterly been depressed and apathetic; then unsociable and violent, using obscene language. These attacks were of regular occurrence. Before she came under Westphal's

observation, she had been exceedingly depressed, and confessed to her sister her love for a girl. As she finally manifested violence, she was sent to Westphal. Men were repugnant to her. During two months residence in the hospital she manifested no delusions or hallucinations, but weakness of judgment was evident. She contracted an affection for a weak-minded patient in the hospital. Five years after, the patient had no more relations with girls. She still masturbated, exciting her imagination as before by picturing female forms. She had attacks of excitement just before menstruation, and periods of depression just after; in these last she suffered from imperative conceptions, which are far from infrequent in these cases. Olfactory hallucinations frequently co-exist with sexual manifestation; hence their appearance in this case. That they are really an atavism will appear obvious when the relation between sexual excitement and olfaction in the lower animals is remembered.

In another case the mother had a neurotic ancestry, but was brought up in refinement. She fell in love with a farmer, and married him against her parents' wishes. The match proved unfortunate. He was prudent, and did not give his wife the comforts of life to which she had been accustomed. She finally become demonstrably insane, deserted her home, and was found one morning behind a pile of wood clasping to her bosom a newborn babe. The child was taken care of by friends until the mother died, and grew up a beautiful girl, but when about seventeen years old exhibited an errabund tendency. She displayed a great liking for boyish games and attire, but a repugnance to suitors. She was persuaded into a marriage with a man to whom she became so repugnant that he deserted her, whereupon she sought refuge in a Pennsylvania almshouse, where she met the second case who came under Dr. Wise's immediate observation. This last woman had an insane ancestry on the maternal side; she preferred muscular sports and labor; she was averse to attention from young men, and preferred the society of her own sex. She was forced into a marriage with a man to whom she bore a female child, but who deserted her, relations with her husband being distasteful. On being abandoned by her husband she went West, assumed masculine attire, became a hunter, and spent several years among the Indians. On her return she published a very quaint description of her hunting life. Becoming reduced in circumstances she sought refuge in the almshouse with the first patient, who became strongly attached to her and the attachment proving mutual, the two took up their abode in the woods as husband and wife. The second patient assumed the name of "Joe," and provided for the two by hunting and trapping. In 1876, the two returned, the wife introducing her "husband" to her uncle. She was kindly received, and her "husband" was hired to work about the place. One day "Joe" was found to be a woman in disguise, whereupon the uncle was so indignant that he caused "Joe's" arrest. She was imprisoned for four months, during which time the "wife" visited her and carried delicacies to her. At length the neighbors prevailed upon the uncle to have the young woman released. When she came out of prison she lived with her "wife" again. At that time the estate of the "wife's" mother was settled, and real estate valued at several thousand dollars became hers. This property she has not claimed, but still leads her old curious life. Her husband died in the Willard Hospital for the Insane. She is about forty-six years old, while her husband was a few years her senior. The husband was admitted to the Willard Hospital for the Insane in consequence of maniacal attacks. After admission "Joe" tried to have sexual intercourse with her associate. "Joe" said that with her husband she had never had anything but repugnant sexual relations, but with her "wife" sexual satisfaction was complete. She had an enlarged clitoris, covered with a large relaxed prepuce. She had periodical attacks of sexual furor.

Blumer reports a case in which psychological phenomena closely resembling those of hysterics were manifest. The patient, a male, loved a man in the purest manner possible. To gain the affection of the loved object he wrote poetry rather above the average of that poured out by enamored youths. His poetry was so pervaded by the dreamy sentimentality of the Platonic philosophic views of the relations of the sex as naturally to create a suspicion that this philosophy might have the same origin. The pervert used endearing names and wrote pseudonymous letters to his "beloved," scurrilously attacking himself as a means of drawing attention to his affection.

Sodomy sometimes results from an imperative conception, or from this arising from a vice or from both conjoined with congen-

ital defect. This last was the case with the amours of the suicide paranoiac Ludwig, of Bavaria, and Wagner, of "Tannhäuser" fame. The letters of the great composer to the King demonstrate this.

One such case came under my own observation. An insane Bohemian girl was admitted to the Cook County Insane Hospital without a history. She had a virginal vagina and hymen, and a funnel-shaped anus. Subsequently her lover came under my care. He admitted she was very lascivious, but feared pregnancy, and had permitted coitus only by the rectum. As a result both became incapable of coitus except when performed in this manner. The erethism of the girl finally resulted in an attack of mania-like sexual furor, from which she died. This flung her lover into a depression from which he recovered under treatment, and he finally made a happy marriage.

Sexual perversion may furthermore reappear in certain races under the influence of old tribal customs. Pæderasty, according to the oath of Hippocrates, was no more of a crime in Greece than ordinary lasciviousness. The boy loves of the Greeks were common features. Socrates and Plato indulged in this love. Pæderasty, as with the Pueblo Indians, often had a religious phase. Campbell points out that both prostitutes and sodomites were religious attachments even to the Hebrew temples. There were consecrated prostitutes and consecrated sodomites whose receipts formed part of the temple income, while the hire of the promiscuous prostitutes and promiscuous sodomites could not be accepted by the temple. The influence of such customs was shown in the relative frequency of pæderasty in France (Marseilles) and Italy (Calabria) where colonies had been early established by the Greeks. In tribes where pæderastic ceremonies were part of the religious exercises, there would be no popular aversion to pæderasty. Indeed, Schopenhauer views pæderastic performances by old men as an illustration of the beneficence of nature in preventing the propagation of the defective beings.

All of these manifestations may appear as phenomena of periodical insanity, as substitutes for epileptic attacks, in paretic dementia, at the onset of puberty and senility in man, and of puberty, pregnancy, senility and the menopause in woman. Furthermore, they are frequently produced on the neurotic soil of the male and female masturbator. The female masturbator of this type usually becomes excessively prudish, despises and hates the opposite sex, and frequently forms a furious attachment for another woman, to whom she unselfishly devotes herself. The same phenomena may be observed in male masturbators. These latter, however, reach insane hospitals early, as their gaucheries are demonstrable.

The female masturbator has not escaped the keen eye of Balzac, who depicted her in his *Demoiselle avec les Teux d' Or.* Browordel has reported an excellent case of the periodical insanity type. The unstable emotional balance of the periods of evolution and involution, like puberty, pregnancy, the climacteric and senility, explains the sexual perversions of these periods.

That these abnormal sexual phenomena may originate in imperative conceptions is readily demonstrable. A woman in the sexo-emotional condition produced by pregnancy manifests aberrant "longings." Pregnant women have insisted on sexual intercourse with a husband and have then killed and eaten him. Recently delivered dogs and tigers often devour their offspring. In the male, similar phenomena occur at the sexual orgasm, when great emotional exaltation exists and the will is in abeyance in consequence. A man may be then seized by an imperative conception differing in character from the voluptuous. Seeing a woman's shoe he is unable thereafter to experience sexual emotions without this conception. Ridiculous as this may seem, more than one victim of this imperative conception has been tried for theft therefrom resulting.

Lawson has reported such an adjudicated case. Sprague, the accused, was arrested immediately after having assaulted a young lady by throwing her down violently, removing one of her shoes and running away with it. He made no attempt to steal anything else, although she had on valuable jewelry. When the trial came on, insanity was alleged as a defense. Numerous witnesses, the principal of whom was the father of the defendant, a clergyman of the highest respectability, testified to the erratic conduct of the prisoner. A family history was elicited which bore most pertinently upon Sprague's case, his grandfather, grandmother, great-grand-uncle, three great aunts and a cousin having been insane. He had himself in his youth received numerous blows and falls upon the head, and within a year from the last head injury he had devel-

oped severe headaches, associated with which his friends noticed a bulging of the eyes. About this time the prisoner developed a fondness for stealing and hiding the shoes of females about the house, and it was found necessary by his relatives and the female domestics to carefully conceal or lock up their shoes to prevent his abstracting them. Upon investigation it was discovered that the act of stealing or handling the shoes produced in him sexual gratification.

About a decade ago I pointed out that not a single abnormal sexual manifestation by itself, could be regarded as evidence of insanity leading to irresponsibility, hence I most heartily agree with Krafft-Ebing, Spitzka and Tarnowsky, that the mere existence of anthropophagy, necrophilism or sexual perversion, unaccompanied by other evidences of nervous and mental disease, is not sufficient proof of insanity.

Between the cannibalistic sexual intercourse, the expression of protoplasmic hunger in the amœba and the picture drawn by Finck and Maudsley looms a seemingly impassable gap, yet evolution has, as demonstrated by these perversionary atavisms, bridged this gap, and from and by what would *a priori* seem the utmost expression of egotism, has developed a secondary "ego" which inhibits explosive manifestations of egotism and hence is an efficient moral factor.

COMMON COLDS.

BY A. NOEL SMITH, M. D.,
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When an individual has "taken cold," as is said, there is certainly a departure from a healthy or normal condition. Although most people have contracted a cold many times in the course of their lives, and had no structural disease as a consequence; yet it is to my mind not only erroneous but dangerous to entertain a belief, as many, more especially non-professional people, are apt to do, that a cold scarcely ever has sequels of a serious nature. And this error in belief has destroyed the lives of many.

No person, it is true, dies merely of a *cold*, as long as it is nothing but a cold simply; but when, from inattention and neglect, it results in certain diseases which at once suggest themselves to the mind, a cold may, and often does, indirectly prove fatal. "Colds destroy more than plagues," was the answer of a physician to one of his friends, who in reply to an inquiry as to his health, said, "I am very well, having nothing but a cold."

Another error into which many are apt to fall is, that colds require no treatment; and I have heard of individuals who not only considered colds as free from danger, but even thought, or pretended to think, them wholesome and promotive of good to the organism in some way which they could not explain. No doubt a man had better have a cold than a more grievous disease, but it must be infinitely better to have neither.

It is unnecessary to note the symptoms of a cold; all are only too familiar with them. Colds seem to be of no certain duration or continuance; and many have been the remedies employed to cut them short in their course. Large draughts of cold water; hot water; hot brandy; whiskey; hot lemonade; gin; eating heartily, or "feeding the cold;" fasting, or "starving" it—all have been tried with variable results.

Neglected colds may be, and are, responsible for many affections which afflict us. We meet every day in our practice some form of the many throat troubles, so common in this changeable climate, which are brought on by exposure to cold and moisture. Very few people are exempt from catarrhal affections of some portion of the respiratory tract. Perhaps acute bronchitis most frequently results from taking cold. Of course every case of such disease does not have this common origin; as bronchitis frequently occurs in connection with other diseases, and also arises from traumatic causes.

Not only may colds be responsible for a catarrhal process in the larger bronchial tubes, but the process may extend downwards, developing catarrhal pneumonia and caseous phthisis. Then, although croupous pneumonia depends upon a specific element for its etiology, and is therefore a self-limited disease, persons predisposed to this affection by constitutional vice may find exposure to cold acting as an exciting cause at any time.

So long as the results of a cold are manifest in the larger bronchial tubes only, perhaps there is not much to fear; but when the smaller tubes become involved, there is everything to fear; for continuous collapse of the air vesicles from obstructed bronchi must end in caseous phthisis.

Now seeing these things are so, and that the dangers to the human economy are so numerous from neglect of the so-called "common colds," what is the inference to be drawn? Evidently this: that we ought to strive in all possible ways to lessen these dangers by prophylaxis, living ourselves, and teaching others to live—especially in this changeable climate—in such a manner as to reduce the number of colds contracted from time to time to the lowest possible number. This can be accomplished only by giving close attention to all hygienic rules. In the first place, a person must have good and abundant food, at regular intervals, in order to be well protected against the arrows of disease. The clothing must be such as will afford equal warmth to the surface of the body and the extremities. It must be comfortable and easy, and not interfere with sufficient perspiration over the surface of the body. The bad results from chilled extremities and cold feet can scarcely be over-estimated. The importance of proper clothing and the necessity of changing with the seasons are well illustrated in the lower animals. The horse changes his coat in the spring and autumn, and in the winter it might be said he has a double coat. The birds moult their feathers in the fall, and the new feathers thicken as winter comes on. The neck does not require so much protection as the body below this point; neither do the head and face. It is a mistake to muffle up the neck too much, especially when walking, as this part is richly supplied with blood-vessels. and does not chill easily.

Again, pure air is essential to the maintenance of health. I firmly believe that in order to enjoy the greatest immunity against colds, one must accustom himself to be out-of-doors in all weathers; and so long as he is protected so that he will not get wet feet, or get wet through, always remembering to keep the mouth closed, and to breathe through the nose wholly, there is no more danger of catching cold out-of-doors than in.

Another prophylactic measure consists in proper and continuous expansion of the lungs. As I have intimated above, certain forms of phthisis and pneumonia will result from the inflammatory condition established by collapse of the air cells of the lungs, on account of obstruction of the bronchial tubes. Now, this result may be avoided very frequently by keeping the lungs, especially at the apices, well inflated with pure air. I believe this process to be one of the most valuable in the prophylactic management of common colds; as I have known persons who, previous to systematic deep inhalations of air, were afflicted often with colds, and thereafter were seldom troubled. And not only is such a course valuable as a preventive, but an established cold may often be cleared up by persistent and frequent exercise of the respiratory muscles.

To conclude, as so many and grave diseases may and do have their origin in the common cold, and as guarding against and preventing disease is admitted to be far better and more philanthropic than to cure it when already established, let us endeavor to educate our communities in every prophylactic measure that experience of ourselves and others may suggest, and thus assist in the prevention of suffering, and in the prolongation of human lives.

PERISCOPE.

Sterility.

The *Archives of Gynæcology*, January, 1891, quotes Dr. Robert Bell, in the *Medical Press*, as saying that while it must be admitted that impotency in the male occasionally is present, it is of such rare occurrence that when it does occur it may be looked upon as phenomenal; moreover, it can generally be accredited to the effects of some previous gonorrhœal or syphilitic attack. That it may, however, occur idiopathically is also admitted, but the percentage of such cases is so very small that for all practical purposes they scarcely deserve consideration. In the female also sterility of an idiopathic origin may likewise be viewed as a very rare defect. In short, it may be accepted as a principle that sterility in either sex is the sequelum of some diseased as opposed to a defective condition of the sexual organs. I consider the one great factor in its production to be a diseased condition of the endometrium. This may be due to various causes, such as stenosis, catarrh, hydrostatic congestion due to a defective heart action, or some vascular derangement induced by obstinate constipation. It may, on the other hand, be aggravated by flexions, versions or prolapsus. Stenosis as well as retroflexion and anteflexion are credited with many evil consequences such as dysmenorrhœa, menorrhagia, etc., but these

various pathological conditions would never co-exist were the endometrium healthy. We are not sufficiently alive to the fact that endometritis proceeding to metritis is a pregnant cause not only of the various affections of the uterus, but of those of the tubes and ovaries also. Take stenosis of the cervical canal for example. In nine cases out of ten it is due to a hypertropic condition of the mucous membrane due to chronic hyperæmia. If such is the case it is needless for me to remark that forcible dilatation, which is so frequently resorted to, in the circumstances can be hardly anything more or less than injurious. If, on the other hand, stenosis is really the primary affection, it does not necessarily imply sterility or even dysmenorrhœa; that is, if the upper reaches of the endometrium are healthy; and for this reason that the spermatozoa can impel their way through as narrow a canal as a fluid can escape by, and blood, if not coagulated, can dribble through a channel of very minute caliber as quickly as it is thrown off in menstruation. If, however, it comes in contact with tissue, be it ever so slightly inflamed, its fluidity decreases and hence the distress which so frequently accompanies stenosis, because coagula have to be forced through the contracted channel by uterine action. Now, just as in endrometritis the caliber of the cervical canal becomes narrowed, so does that of the Fallopian tubes, and more especially does this occur at their outlet into the uterus where the lining membrane, in consequence of its hypertrophied condition, tends to occlude the orifice. In this way hydrosalpinx and pyosalpinx frequently originate. To my mind the one great factor of sterility is endometritis, and in this I include endocervicitis.

Not so very long ago it was accepted as an axiom, that if a woman had ever been the subject of inflammation of the womb she could never become pregnant. Now, however, it is beyond question that this hypothesis is false. Nay, more, I have known of women who have even been the victims of gonorrhœal endometritis to bear children after that was removed. This is a much further advance than pregnancy becoming possible after a simple endometritis had been cured. Endocervicitis may certainly *per se* be the cause of sterility, and doubtless occasionally is, but it is so rarely disassociated with a similar condition of the endometrium, and endometritis is never present without endocervicitis being co-existent. If we examine the discharge which is secreted so abundantly in endometritis, we will find that it frequently consists of a muco-purulent fluid of an acrid nature. The character of this fluid is so irritating that its passage over the vaginal portion of the cervix denudes it of its mucous surface, giving rise to erosion and pupillary ulceration, and not infrequently to vaginitis as well. The effects of its acridity, then, being so injurious to the mucous surfaces over which it passes, can it be doubted that it will have a destructive effect upon the spermatozoa when they come in contact with it? Though this were not the case, however, the disorganization produced by it on the endometrium would certainly deprive this membrane of the power of affording a proper nidus for the ovum, if even it were to become impregnated. If pregnancy does not follow marriage within a reasonable time, there must, as a rule, in the majority of cases, be present some faulty condition of the generative organs of the female.

Flexions are frequently accredited with being factors of sterility. This, however, is only because they indicate an unhealthy condition of the uterine lining membrane and walls. In short, they are only accessory conditions to, and dependent upon, the one prime factor of sterility, viz., endometritis. Now we know that not unfrequently unmarried women are the victims of this disease, and though in many instances it may not be sufficiently severe to interfere very much with the geueral health before marriage, the case is very much altered after that event, and this for obvious reasons. As time goes on the diseased condition of the uterus does not tend to diminish, but on the contrary to increase, in consequence of the periodical excitement the organ undergoes. The unhealthy condition, which at first was trifling, becomes in consequence more and more pronounced. It is little wonder, therefore, if sterility is persistent. If, however, the endometrium, by judicious treatment, is restored to its normal condition, I have no hesitation in affirming that it matters not how long after marriage this is accomplished, the most powerful as well as the most frequent barrier to conception will have been removed. As I have before stated, endocervicitis may exist for a time without the endometrium being also involved, but sooner or later, either by continuity of tissue or by the repeated monthly efforts of the uterine walls necessary to pro-

pel the menses through the narrow canal, or both combined, the endometrium must of necessity sooner or later become involved. The more extensive my experience becomes the firmer does my conviction grow that endometritis is the one great cause of sterility, and not only of sterility, but of flexions and oöphoritis also. This being the case the treatment of those affections is not difficult to conduct and bring to a happy determination. To carry this out successfully, however, it is needless to insist that during the process complete abstinence from marital intercourse be enjoined.

Varieties of Hydrocele.

Duplay, in an article in *l' Union Medicale*, translated in the *Medical News*, March 28, 1891, mentions a large variety of hydroceles which may be encountered in the inguino-scrotal region, together with the means of differentiating them. It is an easy matter to distinguish the so-called "hydrocele by infiltration" from hydrocele with effusion, since the former is simply an œdema, and is not accompanied with fluctuation and transparency, while the tissues retain the imprint of the fingers. More difficult is the diagnosis between encysted hydrocele of the testicle and epididymis and vaginal hydrocele. The differences here consist in the variable connections which exist between the sac and the testicle. The effusion in hydrocele of the tunica vaginalis entirely surrounds the testicle, and the latter occupies a postero-inferior position, aud is a little internal to the tumor. This is the rule, but it is well to remember that in cases of inversion of the epididymis the testicle is found in front of the effusion. In encysted hydrocele there is a cyst which takes its origin between the testicle and the epididymis, either on a level with the head of the latter or a little lower. This cyst increases in volume, little by little, until it conceals the testicle, but it always remains attached to the head of the epididymis by a point more or less constricted, as large as the thumb or two thumbs, and it is always possible to outline the gland, which is impossible when it is enveloped by an effusion.

It is necessary to distinguish several varieties of vaginal hydrocele, and to describe separately congenital hydrocele, and hydrocele in Dupuytren's pouch. In the fetus there is nothing in the tunica vaginalis, and it is at the time of the descent of the testicle that a prolongation of the peritoneum is dragged down, constituting the serous cavity. Congenital hydrocele is that in which the peritoneo-vaginal prolongation is not separated from the large abdominal cavity. The liquid which the sac holds is then very easily reducible, and returns into the abdomen very rapidly when the passage is large. If, on the contrary, the passage is small, it may require some time to return all of the fluid. Hydrocele in Dupuytren's pouch is a second variety of congenital hydrocele. It is easy to confound this variety with bilobar hydrocele. The latter is that in which, owing to the resistance of the fibrous tunic of the pouch, a bridle is formed which divides the sac into two portions. Hydrocele in the pouch is a variety in which the peritoneo-vaginal conduit, instead of becoming obliterated after the passage of the cord, is closed only in its upper portion, this closure completely shutting off communication with the peritoneal cavity. If, under these circumstances, an effusion occurs into the tunica vaginalis, it will divide into two portions, the one occupying the cavity which extends from the base of the sac to the orifice of the canal, and the other an intra-canalicular dilatation. Occasionally the peritoneum is pushed back, and it then forms a subperitoneal sac, which may be felt in the iliac fossa. In some cases, vaginal hydrocele runs even to the external orifice of the vaginal canal.

Of hydrocele of the cord there are two varieties: in one, the cavity presents itself above the line of the cord, and evidently consists of the non-obliterated remains of the peritoneo-vaginal canal. It is seen as a small, resistant, transparent tumor, at a point more or less elevated above the passage-way of the cord. Some cysts of this kind at times descend to the lower portion of the pouch, and it is then possible to confuse them with ordinary hydrocele. On the other hand, the obliteration of the peritoneo-vaginal canal may take place in its lower portion, all the upper portion remaining patulous, and forming a serous cavity which may be taken for an hernia or an effusion. In this variety, which is very rare, the effusion descends along the inguinal canal, and forms a transparent, reducible tumor. This is, if we adopt the name given by Chassaignac, a peritoneo-funicular hydrocele.

Finally, there is hydrocele of the hernial sac, which may extend the length of the in-

guinal canal, and even reach to the base of the pouch. The hydrocele is a serous cavity filled with liquid; sometimes the intestine and omentum are absent, and there is no communication with the peritoneum, but at other times an organ is found in the sac which should be in the abdominal cavity. Hydrocele of the hernial sac does not descend to the base of the scrotum, and it is easy to recognize it. Nevertheless, the diagnosis between it and peritoneo-funicular hydrocele, or cysts of the cord, may be quite difficult.

Safety of Hypnotism as a Remedy.

So much has been written lately of the dangers of hypnotism that it is interesting to note a very interesting and remarkable article on the therapeutic use of hypnotism, by Dr. Hamilton Osgood, in the *Boston Medical and Surgical Journal*, March 26, 1891. In concluding, Dr. Osgood says: I wish again to allude to the feeling that hypnotism is dangerous. If it be applied with the necessary technical understanding and the proper suggestions, the causation of hallucinations being avoided, and if the patient be treated with the gentleness and consideration which is always shown a patient under any other circumstances, *I distinctly deny that danger attends the use of hypnotism.* I do not speak from hearsay, but from a moderately large experience. It is easy to see how harm could arise where a susceptible patient is used as a plaything for the creation of hallucinations, day in and day out, at the sweet will of medical students and of physicians indifferent to all else than their own amusement, indulgence of curiosity or a desire to watch effects. Charcot's patients are trained, *strained* one may say, to the highest degree and by startling and exhaustive methods. It is no wonder that he sees nervous disturbance among them, and that they became mere puppets. Charcot, therefore, declares that only hysterical subjects or persons of what he calls "a peculiar nervous make-up," can be hypnotized, and that hypnotism will create hysteria. This is curiously refuted by all the statistics published by men who hypnotize according to the Nancy methods, men whose united testimony refers to hundreds of patients to Charcot's one. This is my experience, and further, while the larger number of my patients have been non-hysterical, among them strong men, those who were hysterical, and have responded to the treatment, have become free from the nervous ailment.

Is there no argument in Bernheim's decided assertion, after more than nine years of large experience, that he never has seen one case in which harm of any sort has resulted? He shows how harm could be caused, but also that it is wholly unnecessary. I can show that harm has been caused by the use of baths; but does one stop bathing? Liébeault has used hypnotic suggestion during thirty years of large practice and *he* pronounces its proper application harmless. It is singular that mere prejudice strikes stronger roots in some minds than simple truth. The fact is, however, that the laity is more independent of the opinion of the physician than once was the case. People will decide for themselves, and the very results of hypnotic suggestion will be sufficient proof.

A well-known physician, who is a good hater of hypnotism, but who, of course, has not used it himself, else he would have another opinion, said to a relative of a patient whose case I have mentioned, that hypnotism was hurtful. "Yes," was replied, "but there is my cousin, who for twenty years was constantly intemperate and now cannot be made to touch liquor, and his health has greatly improved. This was the result of hypnotism. That is proof enough for me."

Can any fair-minded man fail to see the great value of the treatment in view of such results? One can merely quietly continue the use of a remedy which, in many senses, nothing can replace, and let prejudice take care of itself. No physician, who practically has followed the methods of the Nancy School, confining suggestions to the functions of the organism, will admit that he has ever seen a result in any sense injurious to the patient. Consider the vast number of patients which this statement includes!

One argument against the use of hypnotism I cannot leave unmentioned. It is, that in using it a physician, simply because this thing has in the past been largely in the hands of quacks, might injure his practice or hurt his standing. This needs only one word of reply: To put it mildly, it is the argument of a man without courage. Nevertheless, the timid physician, who *believes* in hypnotism, doubtless finds reason to be thankful for the fact that to-day hypnotic suggestion stands firmly upon scientific ground, and that it is practiced abroad by

men whose judgment is ripe and whose medical attainments occupy the first rank. Personally, I should feel that I were doing wrong, and were disobeying duty, if I were unwilling to apply hypnotic suggestion wherever I saw it were likely to aid the patient. And this is the outcome of my experience in this branch of therapeutics.

Treatment of Chorea.

The notable improvement in many cases of chorea during the administration of sedatives, such as chloral or bromide of potassium, has long been recognized by the profession. Dr. J. A. Jeffries has recently published, in the *Medical News*, his experience with sulphonal. Five of his cases were simple chorea—that is, first attacks of recent origin. These all recovered within three weeks. In two arsenic had failed, in two it was never used, in the fifth either arsenic or sulphonal alone failed, but together they were quickly followed by improvement. Sulphonal was also employed in five other cases, which were either of long standing or second or third attacks; four were at the period of puberty. Three of these cases got well, at least for a month; in three arsenic had failed; in two it was not used. Two did not recover with any treatment. All the cases were also ordered a daily sponge bath, simple diet and sleep in the middle of the day. Although the treatment has only been employed in ten cases, and two of these have shown no improvement, the results in the other cases appear sufficiently encouraging. In reports upon simple chorea, however, it is well to check the results by the average duration of such cases when not under medicinal treatment.

The attempt to place any drug or combination of drugs in the relationship of a specific to chorea represents a form of gross and inexcusable empiricism. Simple chorea, so called, or better, Sydenham's chorea, is the only possible exception to the above statement. Certain choreas are of organic origin (post-hemiplegic), or at least are so classified at present. Such a form of chorea is but little affected by drugs which benefit the simple type. Huntington's chorea, or the hereditary form of the disease, is notoriously obstinate in its resistance to the curative effects of all drugs. There are forms of chorea which are distinctly of reflex origin. The celebrated case, reported by Hamilton, of chorea dependent upon an eczema of the arm, the choræic movements beginning with the development of the eczema, limited to the same arm and disappearing with the cure of the skin affection, is a striking example. Other reflex relations may exist in affections of the nasal mucous membrane, in defects of ocular muscle accommodation, in preputial irritation, or in a variety of other peripheral causes. Laryngeal chorea is almost invariably found to be associated with a local condition of disease in the larynx. Two other forms of chorea, one occurring in pregnant women and dangerous, the other in the aged, are recognized. Rational therapeusis demands, of course, the removal of the cause, and a reflex origin should always be eliminated. Often the symptom of nervous twitching will afford no clew to such a cause. In the simple or idiopathic, or Sydenham's chorea, the following plan of treatment is that observed with most success in the clinic for nervous diseases at the New York Polyclinic. The child is removed at once from school, put on a nutritious and non-stimulating diet, freed from all excitement or mental strain, and given a combination of iron, preferably the dialised, with Fowler's solution of arsenic, 20 minims of the former and 5 to 10 of the latter, three times daily. If there is evidence of malnutrition, as is usual, cod-liver oil and malt is added. If the case does not improve in one week, or two at most, it is put to bed and kept there for three weeks, other treatment being continued as above. In private practice, galvanism to the spine, using the continuous current and small doses at first (5 to 8 milliampères), with seances on alternate days, is at times a valuable adjunct to other methods. Very few cases will be found which are not markedly benefited, if not entirely cured, by the above plan. The arsenic may be increased, if necessary, though the possibility of arsenical poisoning should always be recognized.—*Archives of Gynæcology, Obstetrics and Pædiatrics*, February, 1891.

Keloid.

Dr. Bryson, in the *New York Medical Journal*, March 7, cites an article by Dr. A. F. Plicque, in the *Gazette des Hopitaux*, October 11, 1890, assaying that the anatomical and pathological nature of keloid is much in dispute. Alibert classifies it with cancerous dermatoses; Jacobson considers

it a particular variety of sarcoma; Tilbury Fox as a tubercular affection; and Hardy as a simple deformity of the skin. To account for it more satisfactorily, Bazin invokes the aid of a special diathesis—the fibro-plastic. Erasmus Wilson thinks it a trophic disturbance; Deneriaz, a microbic infection; while Kabler finds a certain relation between keloid and syringomyelia. It has also been suggested that keloid in general is the development on scrofulous soil of what would otherwise be sarcoma, and that it is an illustration of the antagonism of disease. Pathologically, there is no essential difference between the cicatricial form and the spontaneous variety. Embryonic cells penetrate deeply and congregate about the sheaths of vessels far beyond the definite limits of the disease itself. Hence the necessity of extensive ablation in view of total extirpation. True keloid is covered with the papillary layer of the skin, which the cicatricial variety is naturally without. There is also a slight and immaterial difference in the connective fibers of the two forms, but they both belong to the group of fibro-sarcomata. Just here lies an explanation of the benign nature of the disease. As it progresses, the embryonic cells take on the character of definite connective tissue which gradually obliterates the vessels of keloid that in themselves are few in number. Hence the slow devolopment and frequent arrest of sarcomatous elements, of which the essential cells and their nuclei become more and more infrequent and gradually disappear. One close relation to malignant growths, however, is the chronic tendency of keloid to return after removal or treatment.

Pain and discomfort are prominent symptoms. Anything that will relieve these is worthy of consideration. The agent now most in favor is scarification according to Vidal's method. The scarificator, a small, sharp bistoury, is held like a pen between the thumb and index finger. Incisions—perpendicular to the skin and not oblique—are made lightly and rapidly by movements of the fingers and not from the wrist. Quadrilateral incisions are best, extending slightly beyond the area of morbid tissue into the region of healthy skin. This procedure causes considerable pain, which diminishes with each sitting, owing to further division of nerve fibers. The slight hemorrhage may be arrested by pledgets of absorbent cotton applied with the left hand during the scarifying process. A Vigo plaster is then applied. Union is by first intention, all traces of the incisions disappearing in three or five days. While the operation is slight in itself, antiseptic precautions are absolutely necessary to avert all possible danger of consequent erysipelas. Scarification can be applied about once a week at first, and then more frequently if the surface is extensive. Pain is the first symptom to disappear under this treatment, two sittings having been sufficient to relieve it in a case of Vidal's, where it was so severe that the surface had to be protected from the clothing by a wire breastplate. Brocq recommends electrolysis by means of needles plunged into the tumor to the depth of six or seven millimeters. The current—five milliampères—is passed for thirty seconds. The whole surface is thus gone over, insertions of the needle being as near together as is possible without infringing upon the little white circle that appears upon its withdrawal. On account of inflammatory reaction, it is wise to give only weekly or fortnightly sittings. Perhaps the very best plan of treating keloid locally is to alternate scarifications and electrolysis. The diathetic condition, whatever it is, must receive attention. Quinine, where there has been a malarial element, and salicylate of sodium, in a lithæmic subject, have relieved the pain of keloid.

Morphine Habit Treated by Gradual Withdrawal.

Dr. Cottel, of Portland, Oregon, in the *American Practitioner*, states that he has obtained a positive cure in forty cases of morphine addiction by means of the following "mistura diabolica": Morphine sulphate, a variable amount; fluid extract of viburnum prunifolium, four drachms; elixir of ammonium valerianate, three ounces; elixir of sodium bromide, two ounces and a half. The dose is a teaspoonful as required. The amount of morphine is a diminishing one, beginning at a point somewhat below that which has been taken habitually. Tincture of opium may be substituted for the morphine with advantage in some cases, the size of the dose being proportionately increased. The bromide of sodium is in the proportion of five grains in each drachm of the excipient. The mixture can be readily given up after the morphine is dropped from it.

This plan of treatment involves the

gradual withdrawal of the narcotic in cases where there is a *bona fide* desire to be cured; immediate withdrawal is cruel and unscientific, and it is inapplicable where espionage and restraint are not within reach. Rapid withdrawal of the narcotic has the same objections, and the tendency to relapse is greater than when the gradual weaning has been resorted to. The writer adds: "I am confident that no case is incurable, however chronic, provided the general health is fair." The main point will be to win the confidence of the patient in the physician's power to cure, and to secure this he is to be taught that the substitute used by the physician contains no morphine. If he finds that the substitute contains morphine his co-operation will not be given, since nearly all opium fiends have had a sad and fruitless experience in regard to the tapering-off process. It is well not to hurry the reduction of the dose of morphine; in chronic cases, or those of persons who have been taking ten grains or less daily, the patients will usually not notice the abstraction of a grain each week, although some must be dealt with even more patiently than that. In smell and taste this mixture is truly diabolic, and many patients will say they can do without the horrible stuff long before the time estimated as required for the withdrawal has been consumed.—*New York Medical Journal*, March 7, 1891.

The Leprosy Commission.

The Indian correspondent of the *Medical Press*, March 4, 1891, furnishes the following particulars regarding the work of the Leprosy Commission: The Commissioners arrived at Bombay in November, 1890, and at once proceeded with their inquiries in that city, whence they proceeded to Madras, the Central Provinces, Hyderabad and Burma. They have yet to go through Bengal, the North-West Provinces, and the Punjab. This, however, in itself constitutes little more than half the inquiry, and which consists in making the round of the several leper asylums and examining the various patients confined therein. A good deal of time was necessarily spent in getting at the family history and the extent to which members of the family suffered from the disease, and who for the most part are scattered about. In Burma a rather different course was taken, the lepers were collected from the country and from the pagodas. In Prome a house-to-house visitation was made, and a number in this way were got at. A visit was suggested to the mosque at Tollygunge, where on the first Thursday in each month alms are distributed to about 600 paupers, the great majority of whom are lepers. This, however, was obliged to be abandoned, owing to want of sufficient time, but at Hyderabad an opportunity occurred of collecting evidence from a very similar gathering of lepers of the district. Here it appears that a wealthy native gentleman periodically distributed considerable sums of money among the lepers, and hearing of the arrival of the Commissioners in the city, he at once let it be known that he would distribute alms on a certain day, and this proved of great value. The Commissioners were last heard of in Calcutta, where upwards of fifty lepers were thoroughly examined the first day and their family history carefully ascertained. After having completed their work there, they will then proceed to Darjeeling and to Burdwan, and thence to the orphanage at Purulia. Of equal, if not in some respects of greater importance, is the bacteriological laboratory work which must follow on the footsteps of the inquiry, and which will have to be done at Simla, and will, it is believed, occupy about six months. The work there will, for the most part, consist of microscopical examination of the various diseased structures, the separation and cultivation of the leprosy bacillus, and to what extent it may prove to be the medium of communication. On this point some of the members of the Commission retain a perfectly open mind.

Extra Titles.

The *Medical Record* says editorially, March 7, 1891: "The use of extra and distinctive titles for medical men has always provoked discussion among those who have and those who have not the coveted appendages. The recent action of the Toledo Medical Association in resolving to dispense with all extra insignia of rank brings the general subject again to notice. While much can be said on both sides, we confess ourselves in favor of such extra titles as guarantee the possession of extra knowledge or ability. It may sometimes be the question which is the greater, the man or his title, the officer or the office, the professor or the college, the surgeon or the hospital, and so on. Few men are so celebrated as to carry with their work the simple name as

sufficient authority for *ex cathedra* statements. There are too few Hannibals, Cæsars and Napoleons in our profession to make precedents in such a line. Consequently, when a man claims a right to speak from his experience, it is proper to prove his fitness by stating his position and title. But the latter must be distinctive, if it adds force to the arguments and statements of an author or teacher. We admit that such distinctions are invidious, but all distinctions are invidious. Because they are so, men are willing to work and struggle for them, and in so doing make themselves fit the positions when they attain them. We are well aware that the man of mere titles means nothing. Those of professor are in some quarters so common that it becomes a real distinction to be a high private. The fellowships to societies are too numerous to mention, while the medical air is literally swarming with buzzing dispensary assistants. There is a happy medium between the two extremes of magnifying an office or of abolishing it altogether. It becomes after all a matter of taste with each man when and how to name his titles. There is as much presumption sometimes in avoiding their use on the egotistical plea that the name itself is sufficient as there is in making the tail too heavy for the kite. At all events, we cannot legislate on taste or expediency in this matter, and we very much fear that the resolutions of the Toledo Medical Association will be whistled down the wind."

[This is very true. The use of titles is sometimes ridiculous, but the fact that a writer holds a position of responsibility as a teacher or practitioner adds to the force and value of what he says; and, until an author may assume that all medical readers know this fact, it is proper to use a title which will acquaint them with it.—Ed. Reporter.]

Gastric Function in Chronic Nephritis.

In the *Bolnitchnaia Gazeta Botkina*, *No.* 47–52, 1890, Dr. V. Kravkoff publishes an exhaustive paper on the gastric function in chronic nephritis, giving in a tabulated form the results of his experiments on the gastric function of patients with renal affection of different degrees. He states that free hydrochloric acid in the stomach of patients with chronic kidney affections is extremely variable in different cases, as well as in the same case at different times. The variation in different patients is more marked, and its relation to the general clinical symptoms is less marked than that in the same individual. In the latter case the fluctuation is relatively less marked, but its relation to the general condition of the patient is much more conspicuous. In the majority of cases the absolute amount of free hydrochloric acid is lowered, the general acidity remaining the same. In the minority, the amount is normal or absent, but the general acidity is lowered. The absorptive power of the stomach is normal, as a rule. The gastric motor power is lowered only in especially cachectic cases, or cases with pronounced gastro-intestinal catarrh. Sub-acute and chronic attacks of uremia do not necessarily interfere with the presence of a normal amount of hydrochloric acid in the gastric juice and the normal digestive power of the latter.

Medical Schools in New York.

The *Medical Standard*, March, 1891, says: The recent incorporation of the New York College of Physicians and Surgeons with Columbia College has very naturally led to medico-historical reminiscences. It appears that in 1767 Columbia College established the first medical college in New York State. In 1769 the graduation of the students awakened such public enthusiasm that the New York Hospital was founded. The Columbia medical department survived until the outbreak of the revolutionary war when all college work ceased. The Medical College remained moribund until 1806 when the College of Physicians and Surgeons was started. It had no faculty to speak of, but the Columbia medical department had, and this medical faculty was transferred to the College of Physicians and Surgeons which, however, maintained a separate existence. In 1860 a nominal union was secured. The present union is, however, an intimate one. The medical college retains its name, but becomes an integral part of the university system of Columbia. The treasurer and trustees of Columbia assume all financial and other functions hitherto exercised by the same officials of the medical college. Dr. McLane becomes dean of the medical department and one of its representatives in the university control. The income of Columbia is to be drawn on for the support of the medical department. The students matriculate as students of Columbia.

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ELECTRICITY FOR THE DISEASES OF WOMEN.

Much interest has been felt, by thinking men, in the question as to the value of electricity as a curative agency in gynecology. This question has been kept constantly before the profession by the electricians themselves; and as the importance of the subject demanded, a respectful hearing has been given. It cannot be denied that at the present time the profession is disappointed with what has been accomplished by electricity. Only recently it was claimed that electricity was a positive cure for ectopic pregnancy and for many cases of pelvic inflammation, including the various forms of salpingitis and that pelvic adhesions, binding bowels, uterus, ovaries and tubes together, melted like the snow before the summer sun. Now, we hear this no more, or it is only hinted at, or it is hoped that electricity will do these things. Practically, the use of electricity is condemned by conservative men in the treatment of ectopic pregnancy and in all the graver forms of pelvic inflammation. Electricity has failed to abolish the necessity for abdominal section in ectopic pregnancy, and in the various septic accumulations in the tubes and ovaries.

It was claimed that electricity would displace hysterectomy and the removal of the uterine appendages, in the treatment of fibroids; that it would cure symptomatically and anatomically. The proof of this claim has been anxiously awaited, and it is gratifying to record that there is a growth of evidence of the value of electricity—the galvanic current—in the treatment of this disease. The Keiths have shown, positively, that electricity will do much for the relief or cure of fibroid tumors. At the present time it has not supplanted hysterectomy or the removal of the uterine appendages; but has been established as a method of treating uterine fibroids. Careful men exclude it in the treatment of fibroid tumors in which salpingitis exists—a considerable class, of soft myomata, and of fibro-cystic tumors. When it is recalled that most fibroid tumors do well without special treatment, that the occasional use of the curette will suffice in the treatment of many others, and that only a small percentage have been submitted to section in the past, it will be admitted that the field of usefulness of electricity in the treatment of fibroids is not a broad one.

There is no doubt, however, that the galvanic current, properly used in the treatment of uterine fibroids, will arrest hemorrhage, will lessen pain and will, at times, bring about a diminution in size or even the disappearance of the tumor. These facts have been established by thoroughly reliable men and are incontestable. On the other hand it must not be forgotten that in the natural history of fibroid tumors, hemorrhage at times lessens or ceases spontaneously, that pressure and reflex pains vary from time to time, and that the tumors

themselves diminish or disappear at times spontaneously. And also it must be remembered that certain dangers attend the use of the agent. Deaths have been reported; peritonitis has been caused, and growth of the tumor has been accelerated. There is thus a negative side to the question.

It is yet to be decided in what class of fibroids electricity will do the most good, and what the dangers of its use really are. Then its advantages and disadvantages in the treatment of a special class of fibroid tumors, can be compared with the advantages or disadvantages of hysterectomy in the same class of cases.

Electricians claim to cure otherwise incurable cases of chronic metritis and endometritis. These conditions, as primary, uncomplicated diseases, are rarely met; usually they are found as a minor complication of salpingitis—perhaps antedating or causing the salpingitis, but later being kept up by the tubal inflammation. In the rare, uncomplicated form of these uterine maladies, and in purulent endometritis sometimes remaining after the removal of the uterine appendages the use of the galvanic current is indicated if simpler measures fail. When the uterine disease is but a complication of salpingitis, all intra-uterine treatment is contra-indicated.

It is gratifying to be able to call attention to the lecture by Dr. Fisher, on the use of "Galvanism in the Treatment of the Diseases of the Uterus" in the last issue of the REPORTER, which, on the one hand, adds something positive to the literature of the subject, and, on the other, serves as an illustration of the views already expressed. Dr. Fisher is to be congratulated on much that is in his lecture. He has demonstrated something—that in certain cases the use of the galvanic current has controlled uterine hemorrhage, that in one case a fibroid became smaller after the use of the current for a year, and that in another a so-called vaginismus disappeared. He states, also, that he has obtained good results in ten cases not reported.

Dr. Fisher has demonstrated that galvanism will control uterine hemorrhage from certain cases of fibroid tumor and from abortion, after the failure of all medical means. No mention is made of the curette; and the question arises: would not these women have been cured with the curette in a few minutes, instead of in weeks or months by the use of electricity. And again, it is disappointing to those who have hoped much from the use of electricity, to find that in a large clinical service, like that at the Jefferson College, in a whole year's work but twenty women have been benefited. How many have been treated without benefit, the reader is left to conjecture. And, finally, we find that peritonitis has been induced by electricity in the hands of one so careful as Dr. Fisher.

The subject is certainly in an experimental state at the present time, and what is needed is careful reports of actual work, care being taken to make diagnoses as exact as possible. With full reports of good and bad results obtained by the workers in this field, the profession will be enabled to assign to electricity its true value as a therapeutic agent in the treatment of the diseases of women.

EXCISION OF THE VERMIFORM APPENDIX IN APPENDICITIS.

The inflammatory diseases in the region of the cæcum, described usually under the names typhlitis and perityphlitis, are of very great interest. Typhlitis is generally the result of fecal impaction, and it yields readily to medical treatment. The condition described as perityphlitis is probably in nearly all cases due to an inflammation or rupture of the vermiform appendix; appendicitis is, therefore, a better name for it. In it, also, medical treatment is in the majority of cases sufficient; but there are a number of cases in which an operation is the safer

course to pursue, and a still fewer number in which the only hope of saving life is to be found in a successful operation.

The *British Medical Journal*, February 21, 1891, gives a brief account of four cases of appendicitis in which Mr. J. B. Sutton operated and excised the appendix. The first patient was a man, twenty-two years old, with unmistakable appendicitis. Mr. Sutton exposed the cæcum by a lateral operation, and found the appendix lying adherent to the anterior aspect of the cæcum. The middle third of the appendix had sloughed, and an abscess, containing several ounces of pus, had formed as the result of it. The appendix was removed, the stump sutured and the peritoneal cavity flushed with warm water. The patient made an uninterrupted recovery.

The second case illustrates the difficulty attending the diagnosis of appendicitis. The patient had had three previous attacks, and came under Mr. Sutton's care as a case of renal colic; the disease was really relapsing appendicitis. On exposing the cæcum by a lateral incision, Mr. Sutton found the appendix slightly adherent to the brim of the pelvis; its lumen was obstructed, and below the constriction the appendix was filled with pus. The appendix was cut off, and the end was carefully sutured. The patient left the hospital convalescent on the fourteenth day.

The third case had also been regarded as one of renal colic, but Mr. Sutton came to the conclusion that the patient had a post-cæcal abscess, probably secondary to inflammation of a vertical retro-cæcal appendix. This clever diagnosis was verified at the operation; the appendix was lying vertically behind the cæcum, and its middle third had sloughed. The pus was washed away, the stump of the appendix sutured and a drainage-tube inserted. Convalescence was interrupted by an attack of pleurisy, which suggested that the trouble with the appendix was tubercular; no bacilli, however, could be found in cut sections of the appendix.

In the fourth case, the patient had been admitted with typical signs of typhlitis. Under medical treatment he seemed to improve, but in the course of three weeks the presence of pus was clearly indicated. At the operation, a large quantity of pus was evacuated from the iliac fossa; the tip of the appendix had sloughed.

The first, third and fourth of Mr. Sutton's cases are cases in which death would have resulted, in all probability, if an operation had not been performed. There is no dispute as to the propriety of operation in such cases. In the second case, one of relapsing appendicitis, there is still a wide difference of opinion as to whether or not an operation is the best method of treatment. Undoubtedly, in a number of cases, a patient gets entirely well after repeated attacks of appendicitis. If the recurrent attacks are not severe, if they appear to decrease in frequency and lessen in intensity, and if the patient is so situated that he can go to bed when they occur, without serious loss or inconvenience, it is probably best to employ medical and hygienic treatment alone. But if the attacks show no tendency to subside spontaneously, and at the same time are a cause of serious loss and disability to the patient, an operation may be advised. The operation should be performed in the interval between attacks.

Unquestionably lives are lost in cases of typhlitis and appendicitis because an operation is not done at the proper time and in the proper way. But, if Mr. Treves is right, the result would be worse if all cases were subjected to operation. Mr. Treves, who is a distinguished surgeon in this special field, says that, at the London Hospital, nearly all cases of typhlitis recover under ordinary medical treatment, and that only a few cases of appendicitis in young persons require operation. Probably no cases, he says, should be operated on before the fifth day, for cases of death on the third or even the fourth day are almost unknown. Contrary to the impressions one receives from reading the opin-

ions of many writers on this subject, Mr. Treves declares that the operation of removal of the appendix is often very difficult even during a quiescent period. He thinks that some day a portion of the ureter will be removed for an appendix.

Approval of medical treatment for most cases of typhlitis and appendicitis, coming from such a surgeon as Mr. Treves, means far more than it would if it came from any purely medical man; and yet Mr. Treves only gives expression to what is the common experience of most physicians. The chief difficulty which the latter encounter is to decide when medical treatment should end and surgical aid be invoked. The decision in a doubtful case requires close observation, large experience and ripe judgment. We think it would be wise for the physician to consult with a surgeon while the propriety of operating is still in doubt, and not to wait until it becomes clear to every one that an operation must be performed; for, in this as in most other cases, if an operation is required, the sooner it is done the better the chances of success.

HERPES VACCINIFORME OF INFANTS.

There occurs at and about the genital region in infants of three or four months an eruption, which, at first vesicular, soon ulcerates and presents the appearance of a mucous patch. The condition is a rare one, and derives its importance from its close resemblance to the secondary eruption of heredity syphilis, for which it is commonly mistaken. Fournier, who describes the affection in the *Bulletin Médical*, January 28, 1891, has seen only ten cases, and gives the condition the name of herpes vacciniforme by which it is, perhaps, best known. The eruption may appear coincidently in an infant born of syphilitic parents, but in other cases it is followed by no sequelæ. It occupies usually folds of the skin, where adjacent surfaces come in contact. In the first stage, the vesicle resembles that of vaccinia before the period of suppuration. The spots may be isolated or occur in groups or become confluent. In the second stage, umbilication and rupture take place, with subsequent ulceration. The resemblance is strong to a mucous patch. The affection is usually purely local. Occasionally, however, there is involvement of adjacent glands. Without treatment, the eruption may continue indefinitely. Under appropriate management, it may disappear in eight days. Relapses may occur, and the duration may be prolonged for from a month to six weeks. The process is thought to be the result of local infection from the bowel, in consequence of diarrhœa, which often coexists.

The treatment requires absolute local cleanliness, baths of simple water, of bran, or of starch, the application of lotions of boric acid or of diluted Labarraque's solution, a drying powder of bismuth, of oxide of zinc, of salol, or of iodoform, and a cotton dressing covered by some impermeable material.

UNIVERSITY OF MICHIGAN.

It is reported that the bill making an appropriation for the Ann Arbor University during 1891–2 was tabled in the Senate of Michigan, on April 2, to save it from defeat. It was opposed by the farmer members on the ground that "a horde of foreign pupils were being educated at the expense of the poorer taxpayers of the State."

It is to be hoped that this action will be but temporary, and that there will be no impairment of the usefulness of the medical department of the University of Michigan, which has done such excellent work in preparing men for the practice of medicine. The fact that its existence and success did not depend upon the fees of students has enabled it to take a high stand in regard to medical education, and to establish and adhere to a graded four years' course of study. We trust that, in their wisdom, the farmers of Michigan will come after awhile to see

that education is worth paying for, and that, within certain limits, the larger the class at their University, the better for it, and the better for each student; so that it is no disadvantage if some persons outside of the State come there to get an education without charge for tuition. It would be easy to show, from a purely economic standpoint, that it is a pecuniary advantage to Ann Arbor and the State of Michigan to get as many students there as possible, and even to make no charge for teaching them. Were this otherwise, it would still be a very good thing to have large classes at their University, for the good of the people of that and neighboring States.

Book Reviews.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the Reporter.]

PLAIN TALKS ON MEDICAL ELECTRICITY AND BATTERIES. By Horatio R. Bigelow, Fellow of the American Electro-Therapeutic Association. Small 8vo, pp. 85. Philadelphia: P. Blakiston, Son & Co., 1891.

This little book contains a great deal of succinct information in regard to a subject about which most doctors have very hazy notions. The first part is occupied with definitions of terms like, "volt," "ohm," "ampère" and "potential," which must sometimes be troublesome to the general reader, when considering articles in which electricity is discussed. To know what they mean is not common, except with electrical experts; and so it is no reflection on the readers of the Reporter to intimate they might get useful information in Dr. Bigelow's book. Besides this, the book contains very fully and well illustrated descriptions of a variety of electrical machines, and diagrams showing the points on the surface to which electricity is applied for various medicinal purposes, and a therapeutic index in which there is given in alphabetical order a list of diseases and conditions for which electricity is used, with the form of current and the made of application.

MANUAL OF CLINICAL DIAGNOSIS. By Dr. Otto Seifert, Privat-docent in Wurzburg, and Dr. Friedrich Müller, Assistant der II. med. klinik im Berlin. Translated from the fifth German edition, enlarged and revised, with the permission of the authors, by William Buckingham Canfield A. M., M. D. (Berlin), Lecturer on Clinical Medicine, and Chief of Chest Clinic, University of Maryland, etc. Second edition, revised and enlarged, with fifty illustrations and one colored plate. Small 8vo, pp. xi, 185. New York and London: G. P. Putnam's Sons, 1890. Price, $1.50.

This book treats, in successive chapters, of the blood, the temperature, the organs of respiration, the sputum, laryngoscopy and rhinoscopy, the circulatory system, the pulse, the digestive and abdominal organs, the urine-producing system, transudations and exudations, parasites, the nervous system, analysis of the pathological concrements, and metabolism and nutrition.

Those who expect to find in the book a treatise on medical or physical diagnosis, will be disappointed. Relatively little space, for example, is given to the examination of the heart and lungs, and, perhaps for this reason, some of the statements are unsatisfactory and others wrong. We object to the assertion that "very strong bronchophony is called pectoriloquy. In pectoriloquy there is not simply exaggerated reproduction of the voice sounds, but the individual words can also be distinguished. Again, in saying that heart murmurs are transmitted more easily in the direction of the blood-current, the authors give expression to a general and useful rule; but they are wrong when they say that the systolic murmur of mitral insufficiency "is heard most distinctly at the second costal cartilage of the left side." The systolic murmur of mitral insufficiency is heard best at the apex, or a little external to the apex, and it is transmitted to the axilla; in very exceptional cases it is most intense at the second left intercostal space.

The chapters on the blood, the digestive and abdominal organs, the urine-producing system, parasites and the nervous system are all very good. The book as a whole is an excellent one to put into the hands of a third or fourth year student who already knows ordinary medical diagnosis. It will also prove very valuable to a hospital interne who has a liking for clinico-pathological study; but it is too advanced to suit the requirements of the beginner.

TRANSACTIONS OF THE AMERICAN ORTHOPEDIC ASSOCIATION. Fourth Session, held at Philadelphia, Pa., September 16, 17 and 18, 1890. Volume iii, 8vo, pp. xxiii, 242. Philadelphia: Published by the Association, 1890.

This volume contains the papers read at the fourth annual meeting of the Association, at Philadelphia. It was one of the most successful meetings the Association has held. In addition to an admirable address by the President, Dr. De Forest Willard, there were twenty-three papers read. One of the most interesting features of the programme consisted in a series of papers on Lateral Curvature of the Spine, by Drs. Benjamin Lee, of Philadelphia; Charles L. Scudder, of Boston; Robert W. Lovett, of New York, and A. B. Judson, of New York. An extremely interesting and animated discussion followed the reading of the papers.

The Association is to be congratulated upon its thriving condition and upon this last volume of transactions, which bears such ample testimony to the progress orthopedic surgery is making in the United States.

Insoluble Cement.—It is said that a cement which is hard enough to withstand even boiling sulphuric acid may be obtained by gently melting India rubber and adding 8 per cent. tallow while stirring. Sufficient slacked lime should be added to give to the compound the consistency of a soft paste. Twenty per cent. of vermilion is now added, which causes the mass to harden immediately.

Notes and Comments.

Contagiousness of Gonorrhœa.

In discussing the contagiousness of chronic urethral discharges, in the *Journal of Cutaneous and Genito-Urinary Diseases*, March, 1891, Dr. George Emerson Brewer, of New York, says the practicing physician is frequently called upon to answer inquiries regarding the limit of the contagious stage of gonorrhœal urethritis. The question is a serious one, especially when considered in its relation to marriage, and should be regarded as equal in importance to that of syphilis.

It has not infrequently been Dr. Brewer's experience to be consulted by young men, a few weeks or months before a contemplated marriage, with a history of one or more attacks of gonorrhœa in former years, and who believed themselves to be well; yet who upon a careful examination presented the unmistakable signs of a chronic urethritis. The only evidence of disease remaining in these cases frequently was the presence in the urine of small thread-like bodies, to which the name of *Tripperfaden* has been given by the German surgeons, who first described them and demonstrated their importance. These minute shreds are composed of mucus, pus and epithelium; and represent the secretions which adhere to any granular patch or area of chronic inflammation remaining on the urethral mucous membrane.

In consulting the standard authors upon the subject of genito-urinary diseases, one is impressed by the marked difference of opinion, regarding the contagiousness of chronic urethral discharges, held by those whose reputation and experience entitle them to the foremost position in the discussion of this question. As early as 1785 Kühn called attention to the fact that the discharges resulting from a gonorrhœa remained contagious so long as they contained pus. The opposite opinion was held by Hunter, who denied the possibility of contagion from the gleety discharges of a chronic urethritis. This view was also shared by Bell and Ricord. In a paper entitled "Gonorrhœa a Non-specific Disease," published in the *New York Medical Independent* in 1864, A. K. Gardiner strenuously denies the contagious element in any, save the discharges from the most acute stage of the disease; and says regarding gleet that it is "allowably benign and innocous." Noeggerath, on the other hand, in a paper published in 1872, concludes that a man who has once been the subject of a gonorrhœal urethritis, never fully recovers, that the disease invariably lingers in the glands and ducts emptying into the canal, and may at any time furnish a secretion which may infect those with whom he has sexual relations. He also states that nine-tenths of all women married to men who have had gonorrhœa, sooner or later become the subject of incurable and painful inflammatory disease of the uterus, tubes or ovaries; that this infection may take place rapidly, and manifest itself as an acute affection, or by means of a slow and unrecognized process to which he gives the name of "latent gonorrhœa." In a subsequent paper, read before the American Gynecological Association in 1876, the author reiterates these opinions, and adds that 90 per cent. of all cases of sterility can be directly traced to gonorrhœa.

Without entering into any discussion regarding the correctness of these views, which have been the object of considerable criticism, the fact remains that these papers had the effect of calling attention to a source of female disease and suffering, the importance of which had not, until their publication, been adequately recognized. This difference of opinion upon so important a question is hardly to be wondered at, when we consider that at the time these views were enunciated, nothing definite was known regarding the etiology of this disease. Since the discovery by Neisser, in 1878, of the gonococcus, and the (Dr. Brewer thinks) establishment of its relationship to this disease, but one opinion can logically be held by those who accept his theory of gonorrhœal inflammations, and that is, that all secretions containing this micro-organism are capable of transmitting the disease under favorable conditions. In his recently published work upon this subject, Ernest Finger emphasizes this point and states regarding marriage, that it should be absolutely prohibited in all cases where the existence of a chronic urethritis is evidenced by the presence of the "morning drop" or *Tripperfaden* in the urine, until the following facts have been established:

1. That after from two to four weeks of daily observation, the secretions from the urethra are found to be *free from pus and made up wholly of epithelial cells.*

2. That no gonococci can be detected by

the microscope, even after a purulent discharge has been established by the employment of irritating injections of corrosive sublimate or nitrate of silver; and

3. That neither prostatis nor stricture exists.

Dr. Brewer says that upon first becoming acquainted with the views expressed by Finger, he regarded his conditions as unnecessarily severe, and his opinion of the danger as greatly exaggerated. But a somewhat remarkable case, which came under his observation, illustrated in a most striking manner the fact, that unless some of the precautions advised by Finger had been insisted upon, the responsibility of a dangerous illness would justly have rested upon his head. The case is reported by Dr. Brewer, and fully justifies the inferences he draws from it.

Pasteur and his Work.

The *American Practitioner and News*, February 14, 1891, says editorially: At a moment when Pasteur has been apparently promoted to a secure apotheosis, and new eligibles are being sought to share with him the superabundance of divine honors, it comes like a discord in a grand orchestra for men eminent themselves to stand out and boldly declare to the world that the renowned savant is wearing unearned laurels. But that is just what has been done by two eminent Paris physicians, one of them Dr. Lutaud, editor of a leading medical journal, the *Journal de Medicine de Paris*, and the other Prof. Peter, member of the Academy of Medicine. They not only charge Prof. Pasteur with exploiting procedures in themselves worthless, but with exploiting them for gain, and with interfering in political matters for the purpose of unfairly promoting his personal interests.

In a book of some four hundred and forty pages, a second edition of which has just been published by Dr. Lutaud, the whole history of the Pasteur discoveries has been gone over, as indeed they have been from time to time in the author's journal. In the first place, the originality of the discovery that repeated inoculation may confer immunity is denied to Pasteur.

In 1821 Magendie published in his *Journal of Physiology* a series of experiments proving that by successive inoculations hydrophobia limited itself after the third generation or repetition in different animals. These experiments with their results were republished in Paris in 1868, in a work entitled *What to do till the Doctor comes*.

In 1879 M. Galtier, professor in the Veterinary School of Lyons, wrote a communication to the Academy of Sciences announcing that he had discovered that rabies is transmissible to rabbits, and that they thereby become a convenient and harmless instrumentality for determining the virulence or non-virulence of various fluids derived from rabid animals.

In 1879, in April, Dr. Deboué, of Pau, communicated to the Academy of Sciences, through M. Bouley, a treatise on hydrophobia, in which he declared his conviction that the destination and seat of the rabic virus is the medulla.

Pasteur is a member of the Academy of Sciences to which these communications were made. So much for originality.

Passing over the charges in which Pasteur is made to take part in the working of political machinery to promote the election of Paul Bert over Davaine to membership in the Academy of Sciences, for the purpose of securing through M. Bert large government bounties, and to which there may be two sides, we come to the actual status of the several discoveries in the matter of inoculation.

It is shown that Pasteur had made a contract to sell for 1,000,000 francs the total rights of sale of the modified virus of charbon, which fell through because the syndicate could not raise the money, and because at the time confidence was being lost in it and the sales were diminishing; and this while it was stated by M. Paul Bert in the Chamber of Deputies that Pasteur had nobly refused, and declared that since he was receiving a pension from the State his works belonged to the State.

It is now a fact current that inoculation against charbon has gone out of date, the general impression being not only that it is not permanently of value, but that it is even dangerous and destructive. The outcome in chicken cholera and the rouget of pigs has been about the same.

The process invented by Pasteur to further the manufacture of beer of fine quality in France, and which was in its turn heralded as a great addition to the sources of wealth available for France, has been absolutely abandoned.

His labors with the silk-worm have not prevented the steady decline of silk culture in France, the official statistics showing that

from 17,000,000 to 18,000,000 of kilograms of cocoons were produced in 1865, when he gave out his discovery for the protection of the silk-worm. The amount has steadily declined to 3,000,000 or 4,000,000.

But what of the protective measures against hydrophobia, the crowning task of all the works of the great chemist? Dr. Lutaud shows beyond all cavil, by government statistics and hospital statistics that are accessible to all, that from 1850 to 1872 inclusive there was a total of 685 deaths from hydrophobia in France, or an annual average of 30. Seventeen died without treatment in France in 1886, and 22 with treatment. From November 1, 1886, to November 1, 1887, 27 died under treatment; 23 in the year ending November 1, 1889, and 21 in 1889—a reduction from the former average of about 5 per annum. In the year ending November 1, 1886, 1,538 persons were treated for bites by rabid dogs. Claiming with Le Blanc that 16 per cent. of all persons so bitten become hydrophobic, this would give for that single year 246 cases of hydrophobia that would have been but for Pasteur's treatment. But it happened that 16 of these cases died, so that there were 230 lives saved by the Pasteur treatment!

Dr. Lutaud shows further that the number of persons dying of hydrophobia has steadily gone down in all other countries besides France without treatment, and that in some of them it has become a thing unknown. Can we then think Dr. Lutaud too bold in declaring that Pasteur's system of inoculation actually tends to spread hydrophobia in France? This apprehension is further strengthened by the fact that many of these are cases of paralytic hydrophobia, which is the hydrophobia, as a rule, of inoculation.

It matters not how much the world may be dazed by the brilliant name of Pasteur or how much misled by blinded partisans, there is no escaping the principal conclusions of Dr. Lutaud in this matter. For to believe that, while in all other countries hydrophobia is decreasing, in France, beginning exactly with the discovery of a supposed preventive, there should happen in that country enough cases to allow nearly three hundred a year to be cured, and still leave a much larger number than the statistics of the country are entitled to when compared with those of other lands!

We would not rob Pasteur of a leaflet of his merited laurels. He is one of the great men of time, whatever critics closer to him may be led to feel when they see him wearing unmerited honors. He has made discoveries and given a stimulus to discovery that will resound onward through the years to come; but that is no reason why the whole world should fall down in worship of men like themselves and be made blind to the most glaring inconsistencies. And while we honor Pasteur, we honor Lutaud and Peter, who, in the glamour of hero worship, still have the discernment and the courage to speak what they regard as the truth.

New Operation for Lacerated Perineum.

Dr. Alexander Duke, Gynecologist to Steeven's Hospital, writes in the *Montreal Medical Journal*, March, 1891:

I wish to bring before the notice of my gynecological brethren an operation I have designed for the restoration of a lacerated perineum, easy of performance, and which will, when properly executed, form a good perineal floor, and I might almost say practically a new perineal body. The patient, having been prepared by the usual preliminary steps required for the old operation when under the influence of an anæsthetic, is placed in the lithotomy position, the left index finger being introduced almost its entire length into the rectum, a long, straight, double-edged bistoury is made to pierce the tissues *in front of the anus at right angles to the vulva*, and, guided by the finger in the rectum, is made to penetrate the septum for two and a half inches upwards, the incision being enlarged laterally to two inches as the knife is withdrawn. The patient is then turned on her side, and on the points of incision being pressed together, a lozenge-shaped opening will be seen, and when all sutures required have been introduced and are properly adjusted and approximated, the two cut surfaces are brought into direct apposition. The sutures are introduced by a strong cycle-shaped needle with eye near point, mounted on a handle, strong silver wire being the suture preferred. The needle is introduced at edge of incision, and, guided by a finger in the rectum, is made to travel under the cut surface to its full depth above, describing the arc of a circle; and on point of needle appearing *directly opposite*, it is threaded with suture and drawn through. On the ends of this suture being drawn together with the fingers, a good idea

can be formed of how many additional stitches may be required. When all considered necessary have been inserted, passed through leaden bars perforated at intervals, and approximated, a finger of each hand passed into the rectum and vagina will at once recognize the gain in thickness of septum, the external tissue being pushed fully an inch forward from anus, and forming a thick and solid perineal body. The incision being a deep one, on union taking place between the raw surfaces, a considerable amount of support must be afforded in cases where a pessary is required, or where there is much tendency to prolapse of uterus or vaginal walls. My experience of the operation though up to the present time limited, has satisfied me with the results, and there being *no loss of time whatever*, should the operation fail, it cannot add any difficulty to a subsequent one.

Even should the perineum be lacerated to verge of anus, what I describe can be done. I find that leaving the sutures for ten days is generally sufficient, but if I am in doubt as to the union being strong, I cut the wire, but leave it *in situ* for a day or two longer, thus affording some support, and relieving the strain on the edge of suture holes, and I also support the parts by long strips of adhesive plaster carried from hip to hip over new perineum. The wire should be stout and not too tightly twisted.

My friend, Dr. More Madden, has kindly given my operation a trial, and was much pleased with the results, especially in one of his cases where the old plan of operation had been tried previously but failed owing to the patient's poor state of health and a want of healing power.

The advantages of my plan of operation are briefly these:

1. The simplest of performance as yet proposed; no danger of hemorrhage, the surface, when dry, being brought together.

2. No danger of sepsis, as the incision is not open for the admission of any discharge from either vagina or rectum during healing process.

3. No loss of tissue, and consequently no harm done should the operation fail.

Calomel in Kidney Disease.

The general opinion that calomel is contra-indicated in renal dropsy is founded on the assumption that the drug acts on the epithelium of the kidney. When, therefore, the epithelium is considerably affected or partly destroyed, as in so-called parenchymatous nephritis, the mercury, by acting on the already weakened and scanty epithelium, would, presumably, do little good and possibly much harm. Rosenheim's experiments seemed to prove the truth of this theory.

The *Medical Chronicle*, March, 1891, asserts that Fleiner, in an article on the diuretic action of calomel in renal dropsy, in the *Berliner Klinische Wochenschrift*, December 1, 1890, says that he has found that facts are somewhat opposed to the general belief. Two years ago Prof. Erb gave a lecture on calomel as a diuretic, and mentioned a case of chronic parenchymatous nephritis with general dropsy, in which, after all customary diuretics and diaphoretics had failed, the œdema rapidly gave way under the calomel treatment, and the patient finally left the hospital with scarcely any appearance of anasarca. Fifteen months later she appeared again, and stated that all the intermediate time she had been able to work, and had not had dropsy to any great extent. Her disease now presented the characteristics of secondary contracted kidney.

This case made its due impression on Fleiner, then a student under Erb, and the case he details here with extraordinary preciseness and length is, so to speak, a twin of Erb's. The case was one of Bright's disease, threatening death from advanced dropsy. All other remedies proving useless calomel was exhibited in large doses, and *on two occasions in a few days* caused a marvelous improvement, the second time the œdema completely vanishing. Here, as in Erb's case, the patient, after the second treatment with calomel, had, as proved by his urine and the *post-mortem* (he died suddenly two months after), a contracted kidney, chronic parenchymatous and interstitial nephritis.

Influence of Exercise on Digestion.

Dr. Streng, in a lecture before the Medical Society of Giessen, on the Influence of Exercise on Digestion, which has been published in the *Deutsche Medicinische Wochenschrift*, states that he concludes from his own experiments that this influence is of a retarding nature. His experiments, however, suffer from the fact that he always injected 300

cubic centimeters of water before obtaining the contents of the stomach, so that the proportion between gastric juice and water continually varied. The first experiments in the clinic at Giessen were made on two dogs. Twenty-five grams of meat, suspended in 300 cubic centimeters of warm water, were twice injected into the fasting stomach, and after one feeding the dogs were compelled to remain for three hours in absolute bodily rest, while after the other feeding they were made to take active exercise. After the three hours the contents of the stomach were obtained and analyzed. The quantity did not essentially differ in the two cases; the experiments consequently tended to prove that exercise does not influence the time required for digestion. The chemical analysis also detected no difference. The same results were obtained by substituting the white of an egg for the meat. The experiments were then repeated twenty-five times on three men with healthy stomachs. Two of these suffered from sycosis, and the third from insipient muscular atrophy. They were fed each time with 200 grams of minced meat, a bun, a plate of bouillon and three spoonfuls of mashed potatoes, and the contents of their stomachs were obtained four hours and a half afterwards. The exercise after meals consisted partly in gymnastics, partly in walking; absolute rest was obtained in bed. These experiments gave the same results as those on the dogs, the difference resulting from the chemical analysis being especially imperceptible. The author therefore concludes that the gastric function is in no way influenced either by muscular action or by absolute rest.—*Lancet*, March 7, 1891.

"New Philadelphia."

"The New Philadelphia" is the title of a deeply interesting article which will appear in the May *Cosmopolitan*, and is from the pen of Mr. Henry C. Walsh. To those who are not entirely familiar with the "city of brotherly love" of to-day, and who, taking the joke-maker at his word, entertain the erroneous idea that this large city is at best but a sleepy and unenterprising town, the *Cosmopolitan's* article will prove a veritable revelation. The great change that has been wrought during the past decade in the external appearance of Philadelphia is ably set forth, and greatly augmented by the splendid illustrations drawn by Mr. Harry Fenn. A glance at these masterly drawings shows that, in beauty of architecture, the solidity and modernness of construction and design in her homes, clubs and commercial buildings, Philadelphia stands at the very head of flourishing American cities. The business, social and intellectual advancement of this, perhaps the most habitable of cities, is no less marked that is its mere outward progression. Doubtless, too much attention has been paid to other more ostentatiously progressive cities, especially of the West, to the exclusion of the Quaker City and its marvelous growth. The article in the May *Cosmopolitan*, however, places Philadelphia before the public in its true light as one of the best governed, most enterprising and socially, commercially and politically, progressive cities of the United States.

Local Sweating of Reflex Origin.

The *New York Medical Journal*, March 28, 1891, quotes from the *Journal de médecine et de chirurgie* for October, 1890, the following curious observation by Ducorneau: A young woman of good constitution had been confined two months previously. She had noticed for about two weeks that whenever she put her baby to the breast there broke out suddenly a profuse sweating of the thigh and leg of the side corresponding to the breast nursed. The sweating extended posteriorly from the nates to the foot, and lasted through the whole time of the nursing. The same phenomena was observed when the other breast was given. On changing the baby from one breast to the other, the sweating began and ceased always at the same moment with the flow of milk from the side in question. The mother had been considerably reduced by the sweating. Tonics were given and the breasts were rubbed with belladonna ointment. After a few days of this treatment the sweating diminished and finally ceased entirely. Ducorneau attributes the sweating to reflex action, though the *modus operandi* is difficult to explain.

Powder for Migraine.

℞ Citrate of caffeine . . . . . gr. 1½
Phenacetin . . . . . gr. 2
Sugar of milk . . . . . ʒi
To be taken every two hours until relieved.

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Clinical Lecture.

THE DIAGNOSIS AND TREATMENT OF CATARRHAL DYSPEPSIA.

BY JAS. M. ANDERS, M. D.,

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This man, A. P., 57 years old, is a printer. His family history is negative. His own history before the onset of his trouble is also negative, with the following exception. Eleven years ago he had a hemiplegia. Twenty years prior to this hemiplegia he had syphilis, *i. e.*, chancre followed by well developed secondary manifestations. The fact that the hemiplegia followed so long after the date of the appearance of the chancre renders it probable that it was due to cerebral syphilis. You will remember I told you while lecturing on that subject that syphilitic palsies were apt to occur from 10 to 20 years after the initial lesion; also that unless proper treatment was instituted at the proper time, changes would take place in the muscular and nervous tissues, which go on independently of the original cause and of specific treatment. Hence, from the history of this patient's case, I am inclined to think that the hemiplegia was due to the syphilis, which was probably not properly treated. He comes to us to-day for treatment for a different affection. For the last year he has vomited, regularly every morning on getting up, a couple of tablespoonfuls of ropy, tenacious mucus; his bowels have been regular. After eating he experiences a sense of burning weight and gastric uneasiness; he says he has no pain. Pain is not a symptom so constant in the inflammatory form of dyspepsia, from which, as I shall attempt to show, he is suffering, as one is led to suspect by writers on the subject.

Between the two forms, atonic and inflammatory dyspepsia, there are radical differences, hence the treatment must be radically different also; and yet there are symptoms and leading ones common to both. He says he has belching of gas, eructations causing heartburn, due to acids. On palpation he complains of tenderness over the cardiac end of the stomach, percussion elicits clear tympanitic resonance to the costal border, indicating no enlargement of the liver. His tongue has a yellowish white fur with red tips and edges and enlarged papillæ in the latter situation. This latter condition is almost pathognomonic of inflammatory dyspepsia. The tongue is either small with red edges and tip or it is broad and coated, especially in hepatic forms of the trouble, but the papillæ are always bright red and enlarged. The atonic form is due to conditions external to the stomach, and the symptoms are induced by reflex action, such as debility or anemia. In the inflammatory form the symptoms are caused by the local condition. Alcohol is a potent cause as well as immoderate eating, especially of spicy articles of food. He however tells us that he does not use alcohol and is a moderate eater. Of other causes predisposing strongly to this form are syphilis, gout, renal disease, paralysis, weak heart, even though no murmurs be present. In phthisis, gout, and syphilis, gastric catarrh is apt to be early induced. The subacute type of a passive nature is often produced by a weak heart or anything interfering with the return current of blood from the stomach. There is one symptom which is prominent in this case and which is not infrequently met with in chronic forms of inflammatory dyspepsia, namely, vomiting of ropy mucus in the morning when the stomach is empty. This is due probably to sluggish circulation—passive hyperemia. It is often hard to make a certain differential diagnosis between functional and inflammatory forms of the disease,

because many of the symptoms occur in both. Anemia and neurasthenic states are frequently associated with or are precursors of the atonic form; so too is a sluggish liver and constipation—in fact, anything which depresses the vitality of the system; but you do not have the history of syphilis, of gout, of renal, of lung or organic heart disease as in the inflammatory form. The symptoms which, though occurring in both forms, are more aggravated in the catarrhal form, are more constant. In atonic dyspepsia there is gastric uneasiness and a feeling of distention soon after a meal, rather than pain in the epigastric region, and this is the case in the majority of instances of the catarrhal form, though pain is sometimes patent in subacute gastritis. There is more acidity and thirst in the inflammatory variety. The tongue in the atonic form may be clean, or it may be coated with a yellowish or white fur. In the catarrhal form, it is sometimes small and clean, but is usually red at the tip and edges with enlarged papillæ, as in this case. The tongue is often broad, flabby, and coated heavily, but the papillæ are always pointed. Pain, as already intimated, occurs in both forms, though not in the stomach. In the atonic variety there is rarely much pain in the stomach. It may be between the shoulders or across the chest, often the pain is at the back of the head or at the forehead. In the catarrhal form pain is more apt to be felt in the stomach, but as a rule, only in the more acute forms, while in the subacute and chronic forms, pain in the region of the stomach is rare, but usually tenderness, as in this case. In the latter class of cases, pain is generally referred to the head.

In both forms of dyspepsia, alterations in the urine occur. Functional dyspepsia is attended with the presence of urates and phosphates in the urine. When the oxalates are present in abundance, the condition is often called oxaluria, and is frequently associated with a depressed state of the nervous system. In the catarrhal form, urates are present in large quantities, the sp. gr. is apt to be high, a condition of lithemia existing. In both forms the nervous symptoms are well marked, but to a greater degree in the catarrhal form. Patients suffering from inflammatory dyspepsia are apt to be gloomy, hypochondriacal, and suffer from these latter symptoms more than from those referable to the stomach. In the atonic form there are intervals of freedom from all symptoms, while in the catarrhal form the symptoms are constantly present. Drugs used with good effect in the atonic form will be found to aggravate the catarrhal.

In conclusion, I may say, to sum up the points on which to base a diagnosis in the catarrhal form, we have the history of gout, or of syphilis, or renal disease, or phthisis, or heart disease, as predisposing causes. As exciting causes, overfeeding, or improper food; malaria or alcohol. There is more frequent vomiting, more thirst, more heart-burn, more tenderness on palpation, more marked nervous phenomena, than in the atonic form. The condition of the tongue is to be carefully noted.

The treatment of the subacute inflammatory form, from which our patient is suffering, consists in giving the stomach rest, so as to save the mucous membrane and get rid of the waste products. For one or two weeks we will order milk diet, also order the time for feeding and quantity of food to be given. If it don't agree, we will give it pancreatinized or boiled, and to it a quantity of lime water may be added. Soon after feeding, give diluents, because the patient suffers from thirst; the best are mucilaginous substances and water, to which a few drops of muriatic acid should be added. Commence their administration one hour after meals, then every hour or two till digestion is complete. This allays thirst and produces comfort. When solid substances can be added, albuminous substances are better than farinaceous. After two or three weeks give one egg in the morning, a chop and rice or underdone beef for dinner for two or three weeks longer, along with the milk. Of remedies, we should select the alkaline carbonates and saline aperients. We will give this man every morning one drachm of Rochelle salts, to be taken fasting. If the patient can afford to go to a mineral spring, such as Carlsbad, so much the better. I shall also order the alkaline carbonates as per the following.

℞ Bismuth. subcarbonat. . . . . ʒii
Sodii bicarb. . . . . ʒiv
Ft. chart. No. xii.
Sig. One to be taken before each meal.

Attention to the patient's regimen is important. Order, in all cases, moderate exercise in the air, warm clothing, regular habits. After certain indications are con-

trolled and the local condition is much improved, enlarge the diet list and give tonics, beginning with small doses; otherwise the condition will be made worse. By the injudicious use of tonics, especially bitter tonics, this disease has actually been frequently produced. Don't forget to attempt to remove the constitutional cause that has led up to the case in hand, whether it be syphilis, gout or other conditions.

COMMUNICATIONS.

CARE OF THE CHRONIC INSANE.

BY THEODORE DILLER, M. D.,
PITTSBURGH, PA.

It is to be hoped that the bill recently introduced in the Legislature at Harrisburg, by Dr. Morton, president of the State Committee on Lunacy, providing for the erection of a hospital plant for the chronic insane will, with certain modifications, be approved of by the Legislature.

The normal capacity of the five State asylums combined is about 4,000; but they contain now about 5,250—or 1,250 more than their normal capacity. For the past five years the average annual increase in population in the asylums has been 238. Certainly no further arguments are needed to establish the fact that prompt and active measures should be taken to very considerably increase the State Hospital accommodations. The only question is: How shall the State build? In what shape shall the increased accommodations come?

Two plans have been suggested. 1. The extension of the present hospital plants by building additional wings or annexes to them. 2. By providing two new hospital plants—one for the chronic insane, the other for the criminal insane and insane criminals. (Note distinction.)

The adoption of the first plan assumes that the present hospital system is so good that it cannot be improved upon.

The promoters of the second proposition say: We can improve on the present hospital system. By our plan we can take care of 2,000 chronic insane better and much cheaper than they are now cared for. We can procure accommodations for all the insane criminals and criminal insane in a separate hospital plant at a cost to the State of not more than $3.66 per week (the present average rate).

Now if the claims embodied in the second proposition can be substantiated, certainly it behooves the Legislature to adopt them with as little delay as possible. Let us examine them a little more in detail.

Separation of the acute from the chronic insane has long been a *desideratum*. The great bulk of the insane are incurable. There are fully 3,000 inmates in the State asylums who are chronically insane beyond the smallest hope of recovery but who enjoy good, or at least fair, physical health. 1,500 or 2,000 of the most suitable of these would be removed to the new asylum. Here they would be put to work. From 80 to 90 per cent. of them would engage in profitable, or at least useful, occupations. A small infirmary building would suffice for those who became ill with intercurrent physical diseases. Those whose mental condition changed so as to render them no longer fit for the chronic asylum could be transferred back to one of the hospitals. Many of the methods and appliances now in use in the State Hospitals could be done away with in the new asylum.

The present State Hospitals were designed to treat the acute insane. Now, with the great bulk of the chronic insane and all the criminal class removed—with their machinery no longer clogged (if I may be permitted the expression), the existing hospitals would certainly be in much better working order. They might then become hospitals in fact as well as in name.

Now as to cost. The Lunacy Committee estimates that the new asylum will cost $600,000 or $300 per bed, and that the cost of maintenance will be $2.00 per week for each inmate—or $1.66 less per week than the insane are now supported for. The saving in cost of maintenance would in three or four years pay for the new hospital plant. The new asylum itself is not to be built after the fashion of the present hospitals, which the Lunacy Committee say "are characterized by unnecessarily elegant and expensive centre or administration buildings and by long, straight, cheerless wards, having small lodging rooms and dormitories opening into the same on either side; having a small ward dining-room in each corridor, and in many other particulars far behind modern ideas of proper hospital construction; being inconvenient to administer, and so planned as to but partially fulfil the pur-

poses for which they were erected. They cost anywhere from $2,000 to $3,000 per bed, and accommodate, for the sums expended, a relatively small number of insane."

The proposed asylum is to be several clusters of small buildings, two stories in height, plain and simple in their construction, conveying, as far as possible, the house idea and making possible a desirable classification.

Concerning the baneful effects of the chronic on the acute insane who are convalescing I cannot express my ideas better than to quote the following from the Lunacy Committee's report:

"The acute are often heard to allude with horror to the condition of their chronic companions, dwelling most painfully upon the imminent probability of soon becoming hopelessly lost to home, friends and society, and of living the remainder of their lives in similar seclusion.

"Like begets like, and as the population of any hospital for the insane is chiefly chronic, the acute or curable being a relatively limited number scattered through the various wards, this enforced evil association must rob society of many a useful and productive citizen by placing him in daily contact with those who mar his chance for recovery.

"Humanity demands that the most enlightened policy be applied to the restoration of the curable insane, which would be materially promoted by separating the chronic from the curable, in distinctive separate institutions."

In the five State Hospitals there are 226 of the criminal class. The Committee thinks the House of Refuge in Philadelphia could be bought and adapted for them. New York State has for years provided a separate asylum for this class of insane. It seems to me the need of such an asylum for our State is so obvious as to need no further discussion.

I think the second proposition has everything to commend it. If all the readers of the MEDICAL AND SURGICAL REPORTER who think as I do and who are interested in the subject would write to their Senators and Representatives at Harrisburg much strength would be given to the Committee's recommendations.

—Incipient putrefaction of meat may be tested with sensitive litmus paper. The acid reaction of meat is changed to alkaline by the putrefactive process.

FOREIGN BODY IN THE EAR FOR NINE YEARS.

BY BYRON F. DAWSON, M. D.,

KEWANNA, IND.

Some time ago, while attending a case of typhoid fever in a rural family, the mother informed me that her son had in his ear a grain of corn which had been lodged there several years. The story seemed so improbable that I told her she was undoubtedly mistaken about the foreign body being still in the ear, and passed the case by without other thought or examination. Some days afterwards the subject was mentioned again, and the mother reasserted that she was sure the corn had never escaped. I then made a cursory examination of the organ and found the auditory canal did contain a foreign body of some kind, and directed that the boy be sent to my office for examination, but as he was quite bashful, it was arranged that he should come ostensibly to bring a report of his sister's case.

He came, and in a very few minutes after beginning I had removed from his right external auditory canal a grain of hackberry popcorn, surrounded by a considerable mass of inspissated cerumen.

The history of the case is as follows. the boy was twelve years of age in November, 1890. The grain of corn was put in his ear by himself some time during the winter in which he was three years of age, and was removed February 21, 1891, having been lodged in the canal something over nine years. During all this time his hearing was greatly impaired, while he was at times entirely deaf in the right ear.

The only instruments required were a head-mirror, ear scoop and dissecting forceps, yet he was required to suffer the annoying presence of this foreign body over nine years, because the physicians to whom he was taken were "not prepared to doctor ears," and made no examinations of the case. One of them, however, recommended the use of sweet oil in the ear, with the assurance that it would cause the grain to "work out."

The grain of corn apparently was of its original size and shape, and notwithstanding the irritation to which its sharp point might be expected to give rise, the lining membrane of the ear appeared perfectly normal, and hearing was found to be unaffected after its removal.

HYDROGEN PEROXIDE IN OTORRHŒA.[1]

BY ARTHUR D. MANSFIELD, M. D.,

ASSISTANT IN THE PRESBYTERIAN EYE, EAR AND THROAT CHARITY HOSPITAL, BALTIMORE, MD., ETC.

By far the greater number of ear complaints are those in which otorrhœa appears as the prominent symptom and as the cause of the patient's being brought for advice and treatment. The diagnosis of otorrhœa is easy enough to make, but the trouble is not always so easy to cure.

The cause of the otorrhœa may, in the vast majority of cases, come from the middle ear, generally being an inflammation set up there by transmission along the Eustachian tubes from the pharynx, and resulting in final perforation of the tympanic membrane and a discharge externally.

Again, the otorrhœa may result from an inflammation of the external meatus alone, when the drum is not involved at all, or, if so, only externally.

The main indication in suppurative inflammation of the ear—no matter whether from the middle or external ear—is cleanliness; and, as it is almost impossible to wash the ear out properly by the ordinary cleansing means, the advent of a substance which will attack pus, and pus *only*, is a decided advance. Such a substance is found in hydrogen peroxide.

I have had very good results from the use of hydrogen peroxide in all otorrhœas, treated both in private practice and at the Hospital. My method is usually to wash out the ear as thoroughly as I can with a warm alkaline solution—generally a solution of sodium bicarbonate, and then, when the ear has been dried with cotton, to instil hydrogen peroxide and allow it to remain in the ear for ten minutes or so. The action of the peroxide is to decompose the organic matter present by oxidizing it, giving up its atom of nascent oxygen which very readily combines with whatever free carbon, sulphur, or other element it may find. This action gives rise to some such remarks as these from the patients: "it causes a bubbling," or "it boils," or "fries." One likened it to soap-suds. The action is to decompose all the pus present and to clean out the external ear much more efficaciously than water and syringe can do.

After using the peroxide, it is well to again syringe out the ear, to wash away any epithelial scales or detritus that may accumulate from the action of the peroxide. The ear is now thoroughly cleansed of all inflammatory products, and the membrane can be inspected easily, and its condition ascertained. It has been my custom to dust the ear with powdered boric acid and to order the peroxide to be used at home twice or thrice daily, as this may be indicated. I usually have the patient recline, with the ear that is to be treated uppermost, and have some one fill the ear with peroxide of hydrogen. The patient is instructed to allow the drops to remain in the ear for ten or fifteen minutes, then the meatus is wiped out with clean cotton as well as possible, and left alone. This is usually done twice a day, but may be done oftener if deemed necessary on account of the quantity or duration of the discharge. The action of the peroxide is not only cleansing, but also disinfectant, as it has a germicidal effect upon the pus-producing organisms.

Seeing the cases day after day, and cases more or less chronic in character, I have been enabled to note gradual recovery in cases where the ear has been discharging for years without cessation.

The time for recovery varies in the different cases, and depends upon many factors, especially upon the zeal and faithfulness with which the physician's instructions are carried out. As a fair average I have found a week or ten days' treatment generally sufficient to cure a case of otorrhœa, no matter how long the ear may have been running. In many of the acute cases, when treatment is applied in its very incipiency, a few days suffice to effect healing of the lesions and stopping of the otorrhœa.

One complication I have noticed, that may be well worth mentioning, is this: persistent rawness and pain in the external meatus, which follows the use of the peroxide in some cases after all otorrhœa has ceased. This is of no consequence whatever, and soon yields to the use of any of the milder astringents, such as boric acid dusted in the ear. Hearing is not by any means restored in all cases; for, if the case be one of long standing, the chances are that the drum is damaged to such an extent that repair seems impossible.

In conclusion, I may say that I think the

[1] Read before the Medical and Surgical Society of Baltimore, March 26, 1891.

use of hydrogen peroxide in otorrhœa supplies a long-felt need and answers the purpose most admirably. It is a drug for the specialist and for the general practitioner. It may be kept on hand and is generally efficacious when needed, or it may be ordered from the druggist when needed, and instilled into the ear by the patient.

Hydrogen peroxide is undergoing now a "boom," and I feel that many of its uses will be forgotten, but that its use in otorrhœa will remain with us.

PERISCOPE.

Treatment of Uterine Tumors with Electricity.

The *University Medical Magazine*, April, 1891, cites Keith as stating in the *British Medical Journal*, Feb. 14, 1891, that the criticisms with which Apostoli's treatment has been so generally received, give him now, after two more years of experience, no concern. He knows some things that it cannot do; he knows better what it can do. Delicacy of manipulation, perseverance, and a knowledge of electricity are essential in carrying out this treatment with any hope of success or improvement to the physician, or comfort to the patient. The results are slow, but comparatively certain. The only quite hopeless cases seem to be fibro-cystic tumors and fibroids in which hydrorrhœa exists to a great degree. In these cases there is improvement up to a certain point, but it is not permanent. No fewer than one-half of the cases of fibroid seen during the last two years were advised to have no treatment whatever.

Keith regrets no part of his past work so much as that in which he removed so many ovaries for small bleeding tumors. During the last three years and a half he has not performed a single hysterectomy in soft or solid fibroids. He has operated three times for large fibro-cystic tumors, one of thirty-eight pounds, one of seventy pounds and another of seventy-six pounds. In two cases only has he removed ovaries for small bleeding tumors. In one case there was an ovary as large as a hen's egg; the other had two small ovarian tumors.

The electrical treatment is tedious, but may be shortened by using high intensities, with puncture. In only one instance has it been necessary to use an anæsthetic. Till quite recently Keith saw few cases of *small* tumors with symptoms so severe as to need treatment; lately many such presented themselves. The following were the seven earliest cases: (1) Small bleeding fibroid: profuse and painful menstruation; cured by electricity. (2) Small uterine fibroid: painful and profuse menstruation; disappearance of tumor under electrical treatment. (3) Fibroid uterus: almost continuous menstruation; electricity; disappearance of growth. (4) Small uterine fibroid: unusual amount of pain, with suspicion of ovarian and tubal disease, and disappearance of tumor under electricity. (5) Fibroid tumor in posterior wall of uterus: profuse menstruation; disappearance of tumor under electricity. (6) Small uterine fibroid, with profuse hemorrhages; enlargement of ovary; disappearance of tumor under electricity. (7) Long-continued bleeding fibroid: cured by electricity. Thus in five of these cases the fibroid entirely disappeared.

After the treatment is stopped, there may in some cases be no apparent benefit, and the good obtained may not be seen for several months. No explanation is given of the principle of the process which causes the absorption or diminution of the enlargements. In these cases it is certainly *not* that of electrolysis. It must be looked for rather in some form of electrical osmosis. Several of the cases had enlargement of the ovary; not only did the fibroid disappear, but also the ovarian enlargement.

This treatment *almost always* relieves pain. It *almost always* brings about diminution of the tumor—sometimes rapidly. It *almost always* stops hemorrhages—sometimes rapidly. The results are *almost always* permanent, and the growth of the tumor, if it be not lessened, is stopped. The general health is immensely improved. By *almost always* he means nineteen cases out of every twenty.

Health Legislation in California and South Carolina.

Henry A. Riley, Esq., says in *The American Practitioner and News*, February 14, 1891: Two curious cases, involving the power of communities to legislate for matters really or falsely alleged to be against public health and morals, come to us from California and South Carolina. The city of San Francisco has, as is well known, a large Chinese

population, which is not looked upon with favor by the rest of the community, and a resolution was enacted some time since by the city authorities requiring all the Chinese either to remove outside the city and county of San Francisco, or else to a certain designated portion distant from their present quarters. This excited great indignation among the Chinese, and the courts were at once appealed to in order to prevent the execution of the ordinance.

The United States Circuit Court decided in very plain and curt language that the ordinance was unjust, unconstitutional and must not be enforced. It said: "The obvious purpose of this order is to forcibly drive out a whole community of twenty odd thousand people, old and young, male and female, citizens of the United States born on the soil and foreigners of the Chinese race, moral and immoral, good, bad and indifferent, and without respect to circumstances or conditions, from a whole section of the city which they have inhabited, and in which they have carried on all kinds of business appropriate to a city, mercantile, manufacturing and otherwise, for more than forty years. Many of them were born there, in their own houses, and are citizens of the United States, entitled to all the rights and privileges under the constitution and laws of the United States that are lawfully enjoyed by any other citizen of the United States." The court in this case did not believe that any "health" or "moral" question was really involved, and nullified the ordinance.

In the South Carolina case the inhabitants of a town near Charleston wished to get the advantage of being considered a health resort, and so passed a resolution forbidding the cultivation of the soil within the corporate limits, except to the extent of one-eighth of an acre for each owner of land, and absolutely forbidding the cultivation of rice on the part of any one. The ordinance permitted the cultivation of flowers, vines, fruit and forest trees without interference. As this ordinance excited opposition, it came up in various courts for consideration, until at last the Supreme Court decided that it was valid and could be enforced. The judges held that the powers of local authorities to legislate for the general health could not be overruled by the courts.

There will be little doubt felt by thinking persons that the California decision was a just one, but many will question the South Carolina one as giving undue power to local authorities over the use and control of private property. There has undoubtedly been a considerable extension in recent years of the police and health powers of town and city corporations, but the limit has apparently been about reached.

Koch's Treatment.

In the *Lancet*, March 21, 1891, Dr. McCall Anderson, Professor of Clinical Medicine in the University of Glasgow, says: The extravagant laudation with which the treatment of tubercular diseases by means of Koch's fluid was ushered in has given place in many quarters to an equally absurd depreciation of its merits. Considerable practical experience of its results having been gained in the hospitals of Glasgow, it is right that we should take stock of our knowledge and compare notes with one another, in the hope that we may arrive at just conclusions. But as our experience is necessarily a short one, it follows that whatever views may be expressed must be taken as provisional, and liable to modification when a large number of cases has been dealt with, and when they have been under observation for a longer period of time. Before bringing any cases under notice, it may be well to indicate, in a general way, some of the conclusions which, I think, may be derived from them. When a patient is inoculated for the first time with an appropriate dose of the fluid, there result in typical cases—(1) elevation in temperature, (2) a series of other constitutional symptoms, and (3) local reaction. But, in a considerable number of instances, one or more of these sets of symptoms may be absent, or only present in a minor degree. Thus it is not uncommon to find decided reaction at the diseased part with little, if any, constitutional reaction and fever. Or there may be an absence of fever, but other well-marked constitutional symptoms; or local reaction may be alone observed. But, as a rule, the more pronounced the fever and other general symptoms the more decided is the local reaction, and *vice versa*.

With regard to the body heat, the first effect of the inoculation in many cases is to produce a temporary lowering of the temperature, but this soon gives place to a rise, which reaches its maximum generally within twelve hours—sometimes not until the following day; or there may be a primary rise

of temperature the day after the inoculation, and a secondary one the following day, which may even be greater than the first. First inoculations are likely to lead to a slower rise and one of longer duration than subsequent ones, in which the tendency is towards a rapid rise and an equally rapid fall of temperature. It is not, in my opinion, desirable to encourage an elevation which exceeds 104° F., and in this connection it must be borne in mind that an inoculation frequently produces a greater rise than the preceding one, although the dose is not increased. The other constitutional symptoms observed varied in different cases, but the most common were chilliness or rigors, headache, pains in the back and throughout the body, sickness, vomiting and prostration. In two cases what has been described as a measly, but which is really a roseolous, rash made its appearance, but in no instance was a scarlatiniform eruption induced. As regards the local reaction, we can best observe it when the lesion is on the surface, although the symptoms arising when internal organs —such as the lungs—are affected, leave little room for doubt that similar changes take place in them. The first result—in a case of lupus, for example—is the occurrence of redness and swelling which are not limited to the affected part, but spread to the skin in the vicinity, which often assumes an erysipelatoid appearance, and a serous exudation takes place from the diseased surface which dries into crusts. Each succeeding inoculation is followed by less inflammation, and when serum ceases to exude, the crusts become very dry, contract, and finally fall off, leaving a dry, scaly, rosy surface, the cicatrix being smooth, and less pronounced than after any other local treatment with which I am acquainted. When any isolated lupus nodules lie imbeded in cicatricial tissue, the inoculations may fail to destroy them, the poison being apparently unable to get at them ; and what may be done under these circumstances is to penetrate them with a pointed stick of caustic, and then to inoculate again, when a certain amount of reaction ensues, generally making short work of them.

From what I have said it may be inferred that, when the lupus nodules are confluent, the result is better than when they are discrete, and the best cases of all are those in which the whole patch is in a state of ulceration ; that is to say, the worse the case the more brilliant is likely to be the result. But, while tuberculin is often in a position entirely to destroy the existing disease, it seems to have little influence in the way of preventing relapses, which must be warded off by endeavoring to improve the general health, especially by giving anti-strumous remedies—above all, cod-liver oil—just as we have been in the habit of doing formerly in connection with the use of local applications. A patient who cannot take cod-liver oil in full doses—say, to the extent of 3 oz. daily—has a poor chance of being permanently cured. As regards phthisis, the time is much too short to entitle one to formulate very positive conclusions, but I am quite sure that it is undesirable to treat advanced cases in this way. Indeed, I have no doubt that such treatment is dangerous ; or, at any rate, it is very apt to leave the patient in a worse plight than before. But there is equally little doubt if we get a case at the very commencement, before excavation, with a very limited amount of lung tissue involved and the general health not being undermined, the best results may often be obtained. In considering the propriety of carrying out this treatment in a given case of phthisis it must never be forgotten that the extent of the disease is almost invariably considerably greater than the physical signs would seem to imply. Indeed, in most of the patients treated, moist râles, with or without evidences of consolidation, have made their appearance at parts where, previous to the commencement of the inoculations, there were no traces of pulmonary mischief. These new physical signs cannot certainly *always* be attributed to the development of new centres of disease, the result of setting free tubercle bacilli to work mischief elsewhere, because they sometimes appear immediately after the first inoculation.

With regard to diagnosis, there can be no doubt that Koch's discovery is a most valuable one, because, although it cannot be asserted that the fluid exclusively attacks tuberculous tissue, it is *certain* to inflame parts which *are* tuberculous when the appropriate dose is reached, and it undoubtedly often ferrets out quite unsuspected foci of disease.

As to the dose, I think it may be laid down as a good rule that not more than one or two cubic millimeters of the 1 in 100 dilution should be given as a first injection, especially if internal organs are involved, or if the patient is weakly ; but the appropriate dose varies in different persons, just as we

find in connection with the administration of medicinal substances. It is much better to start with a dose which may fail to yield any result than with a large one which produces violent local and constitutional reaction, it being always safer to feel one's way at the outset. We are all cognizant of the fact that the system soon becomes habituated to the use of certain drugs, so that after a while doses may be taken with impunity which might have poisoned the patient at the outset. And there can be no doubt, with reference to tuberculin, that a remarkable tolerance is speedily established; so much so, that we can often ultimately give an inoculation without any result one hundred times stronger than that which at first produced well-marked local and general reaction.

When I commenced to inoculate patients I made use of the syringes recommended by Koch, and with which we are all familiar; but I found that they were somewhat troublesome and uncertain in their manipulation, especially when not manufactured with the greatest care. So that most of my inoculations have been made with an ordinary subcutaneous syringe, graduated for the purpose, which has none of the drawbacks of the other, and from the use of which I have experienced no inconvenience, while inflammation at the seat of puncture has never occurred.

In conclusion, I may be permitted to say this much, at least, with regard to tuberculin, that, whatever the ultimate verdict of the profession may be with regard to the scope of its utility in diagnosis and treatment, it is possessed of most remarkable and unique properties; and no one who has had much practical experience of it, can grudge the encomiums and the honors which have been showered upon its discoverer.

Dr. Anderson concluded by showing a series of cases upon the treatment of which the above remarks were based.

Menstruating Nurses.

That excellent journal called *The Nightingale* discusses in its issue for March 28, 1891, the question whether or not menstruation should be regarded as disqualifying a woman for surgical nursing. Our contemporary says: "About two years ago we referred to what was then to us a novel suggestion. This suggestion came from a Chicago surgeon and was to the effect that the menstrual discharge rendered the nurse infective and unfitted her for service in an obstetrical case, that a menstruating nurse, in other words, should be excluded from such service. Still more recently a surgeon in one of our New York colleges has in the presence of a large class substantiated this inference. This surgeon says that he regards the menstruating nurse as a source of infection and announces as an 'unwritten law' of his practice the exclusion of menstruating nurses from all major operations. Now, if enforced, this rule will be a serious matter to the surgical nurse as it will mean incapacity for three months out of the twelve—it will mean even more than that—it will mean total incapacity from the impossibility of arranging cases so as to accommodate her physiological functions. If this rule be enforced, we say, all women nurses will be driven from the field of surgical and obstetrical nursing. Even in the hospital we are told that it will be impossible to cover its requirements, that in spite of the large classes in our training schools there will come times when not a single nurse will be available. We are told that the pupils of the training schools cannot be depended upon to arrange themselves in single file and to so distribute their incapacities over the month; but that these incapacities will be apt to occur in groups, that a large group of nurses will be found menstruating at one and the same time. Unless women then are to be replaced by men, in surgical and obstetrical nursing, this 'unwritten law' must be inoperative.

"But let us consider the ground of its adoption. We acknowledge that the vagina contains bacteria, we acknowledge that the menstrual blood is already partly disintegrated and that it rapidly becomes offensive. The same, however, is true of the perspiration and other excretions. It would be as rational to exclude every perspiring man from the operating room as to exclude every menstruating woman. The cases are parallel. Again, if curetting and other operations can be performed during menstruation with safety this fact proves the original innocuousness of the menstrual discharge."

Upon this point Dr. William Goodell's opinions about menstruation which were cited in an editorial in the REPORTER, February 28, 1891, are quoted, and a letter from Mr. Lawson Tait is published, in which he says: "The question of dealing with menstruating women in relation to my op-

erations has never entered my mind for a moment. It is a suggestion that has never been made to me till the present moment and I cannot imagine anything more ridiculous. For years and years of my work, in every case the anæsthetic was given by a woman. There are always four or five nurses about in each operation, and I dare say that very few of my operations indeed are performed without some of the female persons present being in that condition."

Treatment of Headache.

Dr. Dercum, in a lecture published in the *University Medical Magazine*, April, 1891, speaks as follows in regard to the treatment of headache.

We come now to the treatment. This is an exceedingly knotty question. I shall not spend time in the consideration of the treatment of organic headache. I can indicate only general principles. If there is a tumor, it should be removed if possible. If there is meningitis, it is to be dealt with on general principles. If the patient bears the iodides and mercurials well, they should be given, while at the same time counter-irritation should be practiced. Especially is this treatment applicable in headache following sunstroke.

A great deal might be said in regard to the treatment of the cases that belong to the group of migraine. In the first place, the patient should be put on such constitutional treatment as will improve the general condition and bring it up to a high standard. Every error of diet should be eliminated, not because the patient has gastric catarrh, but because he suffers with migraine. These patients should be given large amounts of milk in addition to other food. The food given should be in a digestible form. Exercise is another important factor. This should be rigidly insisted upon. However, in spite of what you do, although the attacks may be less frequent, it is improbable that you will be able to stop them altogether. I do not say that this is invariably true, but it is so in many cases. In addition, it is necessary to practice some decided interference at the time of the attack. One plan is to use morphia. Of course, that is a decided way of dealing with pain due to any cause. This is, of course, a dangerous method of dealing with pain, especially where there are recurring attacks, for the patient inevitably acquires the morphia habit. Again, especially where the migraine is associated with sympathetic spasm, the pain is often relieved by large doses of whiskey, especially if it be given hot. Various drugs have in recent times been given, not only for migraine, but also for other head pains, notably antipyrin and antifebrin. Antipyrin is a very valuable drug, and is a decided addition to our armamentarium. In some way or other the notion has got abroad, and is held by many people, that antipyrin is a dangerous drug. An ordinary individual will stand ten, fifteen and even twenty grains without noticeable effect on the heart or pulse. Antifebrin is a dangerous drug, and should not be given in large doses. Antipyrin, however, only exceptionally acts as a depressant. A good plan is to associate the antipyrin with bromides. The depressing effect, if any, can be prevented by giving digitalis, or especially aromatic spirits of ammonia, which is acceptable to the stomach in this condition. Cannabis indica also enjoys a reputation in the treatment of migraine, and a just one. One-fourth to one-half a grain of the extract may be given at intervals of four hours.

In the treatment of functional headaches, due to anemia or chlorosis or to hyperemic states, general principles, of course, must guide you. The anemic patient needs the best hygiene, and especially does he need iron. He requires the most nutritious diet. The headache of chronic nervous exhaustion and neurasthenia may also be spoken of here. The only way in these cases is to put the patient to bed for a while. Forced feeding, especially with milk, and massage and faradization, will cause improvement in the general health, and the headache will disappear. You may treat some of these cases in other ways, but you will make no impression on the headache until you put them to bed. If you make the diagnosis that the headache is due to neurasthenia, do not hesitate to tell the patient of the necessity for rest, else you will fail in relieving the headache, and your reputation will suffer.

The headaches due to disorders of nutrition, as the various diathetic headaches, will call for their special treatment. The uremic, rheumatic and diabetic headaches suggest what is to be done. The same is true of the toxic headaches. I shall here refer to one point only, and that is in connection with the malarial headache. This is not, as a rule, relieved by ordinary doses of quinine, such as would prevent the recurrence of a chill. If you do not give large doses, you will fail.

Twenty and even thirty grains are required to make an impression. Where it is necessary to give very large doses, it is well, in order to avoid irritation of the stomach, to give the drug in ten-grain doses in capsules every hour with a quantity of milk, until the required amount is taken. In that way the quinine will dissolve slowly in the presence of the curds of the milk, and there will not be much irritation of the stomach. In order to obtain the best effect the remedy should be administered four or five hours before the expected attack.

In regard to headaches of reflex origin, each case will require the appropriate treatment. The eye, nasal and gastric headaches suggest their respective treatment. Gastric headaches are due to chronic gastritis, and the treatment should be directed to the relief of this condition. Do not let yourself be turned aside from the proper thing to do by dabbling with pepsin and other digestants. Put the patient on a bland diet, give him nothing but milk, perhaps with a few crackers, or stale bread. To this possibly may be added beef juice from time to time. If he will consent to give the stomach a rest he will recover. This is the most important part of the treatment. Nitrate of silver is also of service. One-fourth of a grain of nitrate of silver, with hyoscyamus or belladonna, may be given thirty minutes or an hour before meals. It should be swallowed with as small a quantity of water as possible. Even if there be formed, as some assert, an albuminate of silver, there can be no doubt that the drug has some alterative effect upon the stomach. It probably acts as a stimulant and a sedative. It is probable that it rapidly undergoes chemical change, but we know that cases improve more rapidly with silver than without it. During the attack of headache it is well to give an emetic, and preferably one that will not irritate the stomach. You would not, under these circumstances, think of giving mustard. You could give the patient warm water until he could retain no more. The moment vomiting takes place the headache is relieved. The vomiting should be followed by the administration of an alkali, such as bicarbonate of soda, soda-mint or a tablespoonful or two of lime water in ordinary water.

If you have an obscure headache, for which you can find no obvious cause, and you detect physical signs of cardiac disease, you must take this into account. Do not forget, further, the part that the bowel may play in the production of headache. Uterine headaches will require their special treatment.

Regulation of Prostitution.

The *Medical Record*, March 28, 1891, says editorially: The discussion of the subject of licensing prostitutes and regulating prostitution has again become a subject of present interest. The Legislature of Missouri has before it a bill providing for the regulation of prostitution. At the International Medical Congress, Dr. Thiry read a paper on the subject which excited much discussion, and quite recently it has been brought up before the New York Academy of Medicine. We notice also that even in so remote a land as Japan there has been an agitation started, and the Imperial Diet has been memorialized by a large number of citizens, who ask for the abolition of the license system and present statistics showing that it is a failure in Japan.

Those who assert that the licensing system should be established, produce statistics which show that it reduces the amount of venereal disease. For example, in France, M. Commenge has recently stated, at a meeting of the Academy of Medicine of Paris, that he had collected the statistics of the number of diseased prostitutes found in the decade from 1878 to 1887: First, among women registered by houses or cards; second, among those women who—though registered—were the object of more or less frequent arrests, and constituted a special class under the name of *femmes du dépôt;* third, and lastly, among the uninspected, or women that lived by clandestine prostitution. The results obtained, based on nearly a million visits, showed the number of cases of syphilis in each thousand examined to be respectively 3.1, 2.7 and 23.9. Of other venereal diseases 3.0, 2.5 and 14.5.

Thiry, of Brussels, gives similar figures. The Vienna syphilographers are all naturally in favor of regulation. Neumann would have prostitution entirely under government control. Prostitutes should, according to him, be regularly examined, and, if diseased, quarantined. Soldiers, sailors and even factory hands and wet nurses should also be regularly examined. Already in Vienna each prostitute receives a book containing a description and photograph of herself, and a copy of the laws relating to prostitution.

No one under sixteen can be registered, no persons afflicted with organic or constitutional disease. Sanitary examinations are made twice a week, all diseased women are put into hospitals, primary syphilitic cases are quarantined for three months, and kept under treatment for two years. Clandestine prostitutes are treated in the same way by their own physicians.

The results of this treatment in Vienna are not dwelt upon with so much enthusiasm as the methods. Vienna is rank with venereal disease. The idea that continence is a moral virtue, simply does not exist for men or for lower-class women, half the births in the city are illegitimate, and Austria's Crown Prince shoots himself as the result of a low intrigue. Statistics are brought forward by the opponents of licensing which appear to show that the system is a failure in Paris, Berlin, Italy and Great Britain. The statement of Lacour, chief of the police of Paris, that licensing does not protect and that prostitution cannot be made safe, is also often quoted.

It seems, therefore, that judgment must be formed upon general principles, since the facts are so inadequate. One general principle, viz., that the sexual propensity cannot be regulated by law, seems to be a pretty safe one. If there is a general desire in a given community to do a thing, it will be done. Regulating prostitution, however, is said to make this indulgence safer. Facts do not quite prove it. Furthermore, it is admitted that all attempts to register and examine prostitutes thoroughly have failed. And for our part we should dislike to feel that members of our calling would accept so low and despicable a position as that of government examiners of prostitutes.

A mistake which advocates of the licensing system make is that of considering the question solely as a sanitary one. Even if it were proved that syphilis were reduced five per cent. in a given community, it would not prove that the community was a happier or healthier one. For under the stimulus of a government assurance that prostitution was safe, the amount of illicit indulgence might be doubled, with the result of increased domestic trouble and moral degradation. The injustice of forcing women to be examined, and not men, has often been referred to. M. Thiry considers this a "fallacious idea," though upon exactly what grounds he fails to state.

It has seemed to us, taking all the facts into consideration, that the safest method of treating the subject of prostitution is the educational one. Its moral and physical dangers should be assiduously inculcated, especially upon the rising generations.

Rupture of Linea Alba.

In the *Australasian Medical Gazette*, January, 1891, Dr. R. D. Pinnock, of Victoria, writes: When reading Dr. Monsell's interesting case of this rare accident it occurred to me that Dr. Dimock, one of the oldest and most respected members of the profession in this city, had, some time ago, told me of a similar experience in his own practice. I have, therefore, reminded him of our conversation, and he has kindly allowed me to send you the following particulars which he has looked up from his notes and which, he informs me, have never been previously published:

"Mrs. Sharwood, a wheelwright's wife, aged (at time of birth of fourth child) 35 years; confined on November 5, 1876. During labor linea alba ruptured, and the limbs of the child could be distinctly made out through abdomen. The late Dr. Nicholson also saw this case and recognized the nature of the accident. The labor terminated safely with a living child, but she was very ill for 17 days afterwards. Three years afterwards she had another child and a good time, and she is still living, but at a distance from Ballarat."

Dr. Dimock has been nearly 40 years in active practice, and has had an immense midwifery experience, but never saw or heard of a similar case until I mentioned to him the one published by Dr. Monsell. He also tells me of another unusual experience he had in midwifery, which is well worth recording.

The labor was going on quite normally in every way, and when the head of the child was actually *visible* outside the vulva it suddenly retracted, labor pains ceased, and on examination he found the child had returned within the uterus, and there was no return of labor for 38 hours afterwards, when the birth took place easily and naturally.

During last year I was consulted by a young man in charge of a country railway station for severe pains in the abdomen. He said he had overstrained himself in helping to push some empty trucks the day previously. On examination I found the linea alba ruptured for a space of three

inches immediately above the umbilicus, and the contents of the abdomen easily felt between the separated recti. Pressure inwards at this point caused a sickening pain. Lateral pressure approximating the recti gave great relief. I strapped the abdomen firmly and ordered him to go to bed and lie on his back for a week, but never saw anything of him again. This case was seen with me by Dr. Whitcombe, who agreed in the diagnosis.

I do not recollect any similar case being reported, and therefore mention it in connection with the other.

Trichloracetic Acid as a Test for Albumin in the Urine.

Dr. Nestor Tirard, Senior Assistant Physician to King's College Hospital, London, writes to the *Lancet*, March 21, 1891:

"The practical value of trichloracetic acid as a test for albumin in the urine is so great that any sources of error in its employment should be carefully noted. In a letter from Dr. C. F. Heywood, of New York, which appears in the February number of *Merck's Bulletin*, the writer, after speaking in very laudatory terms of the value of the test, says: 'I have yet to find that it declares any *other elements* of suspected urine than albumin,' and he recommends that a saturated solution should be carried about in the pocket. I have long been employing this test, both in private and in insurance examinations, and can speak very highly of its results. I have been in the habit of comparing its reactions with those given by nitric acid and picric acid, and while I have never found it fail to react in specimens in which albumin has been discovered by other tests, it has given a line of opacity in numerous samples which have been unaffected by nitric acid or picric acid. In some of these the trichloracetic acid appeared to be a more delicate test, since in cases with a history of an acute attack of nephritis the urine has often given a line of opacity after it might have been declared free from albumin when the customary tests were employed. On the other hand, the need of the warning originally given by Boymond has been very strongly impressed upon me by several cases—viz., that when the urine is rich in urates the reaction may appear without any albumin being present, and this possible source of error can only be avoided by free dilution of the urine before making the test.

"With regard to the desirability of carrying this reagent in the pocket, the effects of a crystal on a piece of blue paper or on the blade of a knife have been sufficient to deter me from making the experiment. Although trichloracetic acid may be used either in a solid or liquid form, it gives the most striking results when a good-sized crystal is dropped into the test-tube containing the urine. The crystal speedily liquefies, and, if albumin is present, produces a zone of turbidity in the urine just above it, otherwise a sharply-defined line marks the junction of the white acid with the yellow urine. The zone of turbidity appears immediately when due to albumin, but when due to urates it forms more slowly, and is not so wide."

Angina Pectoris.

The *Medical Press*, March 18, 1891, says, editorially:

Angina pectoris is by no means what may be termed a new disease, yet its phenomena and its very nature still present so many obscurities that the subject has monopolized the almost unprecedented number of three evenings' discussion at the Medical Society of London. Those who take their medicine and pathology from text-books will be saddened at finding the divergence of opinion on the part of authorities with respect to the precise nature of the morbid process which gives rise to symptoms designated in their integrity under the name of angina. It is but too obvious that under this somewhat misleading title are grouped conditions of widely different origin, of very different nature, and amenable to vastly different treatment. This must infallibly prove to be the case when nomenclature is based on symptoms rather than on pathological observation, and it justifies the attitude of those who evinced a desire to dispense with the use of a term which implies nothing except pain and distress in a particular region of the body. The term angina pectoris is about as scientifically precise as stomach ache. Anginal attacks vary immensely, as is well known, both in severity and in import, but all attempts to group them on a more scientific and topical plan have proved unsatisfactory. The most surprising feature of the prolonged but instructive debate was the antagonism of views respecting clinical

details which one would have supposed would have been by this time clearly made out. For instance, is angina, in its principal variety, a disease associated with high arterial pressure or not? At first sight the evidence in favor of the pain, which is the most salient symptom, being due to overdistention of the heart, appears to be overwhelming, and this view is reinforced by the palliative effects of drugs which lower arterial tension, such, for example, as the nitrites, the use of which in medicine is one of the most striking examples of the application of physiological investigation to practical therapeutics. There is, on the other hand, evidence which we cannot afford to overlook that heightened blood pressure is not an invariable or even an essential concomitant of angina, while in many diseases associated with an abnormally high blood pressure, anginal symptoms are comparatively rare. As to the neurotic hypotheses according to which angina is referable to an unproved and unprovable neurosis of the heart, these may for the present be dismissed with the Scotch verdict of "not proven." It is worthy of remark that most cases of angina occur in persons not constrained to hard work, though the first attack is frequently associated with, and dates from, some unusual muscular exertion calculated to throw an unwonted strain upon a heart which has been enfeebled by senile or other degenerative or organic structural changes. It is, moreover, distinctly associated with the gouty diathesis, and there is much to be said in favor of the view that what we call angina pectoris is in many instances only the manifestation of a gouty heart. This is not inconsistent with the view that it may be directly the result of overstrain of the heart, for it is not unreasonable to infer that the proclivity which gout shows to attack damaged tissues generally holds good in respect of the heart just as in the case of joints, etc. Then, again, as was clearly pointed out by Dr. de Havilland Hall, a certain proportion of cases which are diagnosticated to be anginal really belong to quite another category, and several instances are on record in which the pain and distress which were supposed to be pathogenic of angina have subsequently been shown to be due to hepatic colic, indeed, the resemblance is occasionally so close that it may be well-nigh impossible to distinguish one from the other unless suspicion be aroused as to the veritable nature of the mischief. The observations and inquiries which can alone elucidate the moot points in this protean malady are unfortunately of a kind not readily accessible to the ordinary practitioner, but it ought not to be difficult for those whose means of investigation are more extensive to provide us with accurate and reliable data to go upon. At present there is too much surmise, and too little direct observation, and this accounts for the difference of opinion which the discussion has elicited on matters of fact.

The Fluviograph.

The *Engineering Record*, March 28, 1891, says: At a recent meeting of the Société d'Encouragement, Mr. Ch. Mocquery, Chief Engineer of Bridges and Roads, described what he termed an electric "fluviograph," an instrument designed to register at any desired distance, by means of electricity, variations in the height of water level of a water-course, and to give timely warning at sites of dams of impending floods, so as to enable adequate means to be taken to provide for heavy rushes of water.

Briefly described, the device consists of a float about 1 inch in diameter, which rises and falls in a vertical cast-iron tube, the latter being in direct communication with the river whose varying levels are to be recorded. This float transmits its motion to a wheel, whose circumference measures exactly one meter (3.28 feet), and which gears with another wheel of such proportions that every five centimeters of vertical displacement of the float corresponds to an interval of two teeth on the smaller wheel. A conveniently arranged electric contact thus permits of sending an electric current through a wire at every such displacement, and gives indications of the nature of the variation in the water level. These can be recorded on a chart. Arrangements can also be made for electrically sounding a high water alarm. The device is said to have been in use on the river Seine since 1882.

—Stern, of Breslau, says that bacteria sink to the floor within two hours, in a room perfectly quiet; and recommends that rooms vacated by patients be closed for twenty-four hours, after which the furniture should be carefully removed and the floor and walls washed with sublimate solution.

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The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

SPERMINE.

The craze over Brown-Séquard's so-called elixir led to attempts to find an ingredient in the semen or testicles which would produce the effects claimed for the testicle-juice he used. Such a substance has been quite largely advertised by an enterprising firm of manufacturing chemists in Detroit, under the name of "Spermine." This material, however, is not new. Spermine, as the *Chemist and Druggist*, November 1, 1890, says, has been known under various names since 1851: as Charcot or Charcot-Neumann crystals, as the asthma crystals of Leyden, and as Schreiner's crystals. In 1865, Boettcher found them in semen, and they have been obtained from the spleen, the blood, the spinal cord, the white of egg, sputum and old anatomical preparations. In 1888, Ladenburg and Abel established their identity with ethylenimine ($CH_2.CH_2.NH$.). The alkaloid, properly called piper-azidine hydrochloride, resembles other ptomaines chemically, and when free has the odor of fresh semen, the same odor sometimes found in sputum being no doubt also due to its presence.

On this subject, *Merck's Bulletin*, February, 1891, states that spermine has not been shown to be identical with piper-azidine, and that it is as yet not obtainable by synthesis. Natural spermine has not yet been obtained pure in any considerable quantity, and the difficulties so far found in the way of its isolation have led to attempts at preparing its equivalent synthetically; but hitherto these attempts have not yet led to any definite result.

On a survey of the chemical results published up to the present day, it appears that the synthetic products variously designated as piper-azine, piper-azidine, ethylene-imine and di-ethylene-di-amine are mutually identical; but that their identity with Schreiner's natural spermine from spermatic fluid is not yet established. Ladenburg, who first intimated the possibility of his ethylene-imine being identical with spermine, has taken up this question anew, and is now engaged in a comparative investigation of the two substances. According to Bock, the excitant properties ascribed to natural spermine are totally absent from the synthetic compound above named.

From all this it will appear that chemists and manufacturers of pharmaceutical preparations feel quite a lively interest in this substance, which appeals so strongly to the imagination, and that their efforts have been more barren of results than have been those of the experimenting clinicians of Europe—we say Europe, because the folly was soon over in this country. In Europe, we find Brown-Séquard from time to time reporting brilliant results from the employment of testicle therapy, and once in awhile some one else produces seemingly corroborative evidence to its worth. In Russia, we are told, Dr. Roschtinin reported, in March,

1890, a series of experiments which he had made with the injection of spermine, and declared it had proved an excellent stimulant in asthma with heart complications, paralysis of the extremities, angina pectoris, diabetes, fatty degeneration of the heart, and in pneumonia. It is said also that spermine has been used with good results by other Russian physicians in delirium tremens, tuberculosis, and atonic ulcers of the leg.

If it could really do all this it would be but little inferior as a remedy to some things which are advertised in the newspapers; but after reflecting on the subject, we incline to the opinion that spermine is an agent better suited to the use of persons of an imaginative turn of mind and sanguine disposition than to that of calm and critical practitioners. Its temporary acceptance seems to be only one of the evidences we have recently seen that the medical profession may occasionally try to take its bearings from a meteor instead of from a star.

TREATMENT OF CHRONIC CONSTIPATION WITH BORIC ACID.

Chronic constipation may be the result of stricture of the bowel, or of chronic catarrh, or be caused by the pressure of some organ, such as an enlarged or retroverted womb, which occludes the lumen of the bowel. But there are a large number of cases of chronic constipation not to be referred to any organic or mechanical cause. In many cases the bowel is in a sluggish, insensitive, atonic condition, which is due primarily to neglect on the part of the patient to heed the first gentle warnings that the bowel needs to be emptied. As this neglect becomes a habit, the bowel itself gradually ceases to make its condition manifest, and chronic constipation develops. The symptoms and distressing consequences of the condition are well known to every physician, and they need not be mentioned in this connection.

In recent years there has been a tendency to use purgatives as little as possible, and to resort to massage, electricity, gymnastics and baths. These methods can be carried out when the patient has a skilled attendant and sufficient means and leisure.

In many cases, glycerine by the bowel is to be preferred to the administration of purgatives by the mouth, and its use necessitates less loss of time and less change in the patient's habits of life than when massage, electricity, etc., are used. A more recent remedy than glycerine is suggested by Dr. Flatau, in the *Berliner Klinische Wochenschrift*, March 2, 1891. Flatau recommends powdered boric acid very highly in those cases in which, as the result of chronic inflammation of the rectum, there is sluggishness of the rectal mucous membrane, a circular border projecting more or less at the point where the rectal mucous membrane merges into the anus. In such cases, the buttock upon one side is strongly abducted, the parts are carefully washed with cold water and then dried, and finely-powdered boric acid is applied to the exposed rectal mucous membrane. The quantity used by Dr. Flatau is rather indefinitely expressed as a "good knife-point full," and he uses it either by dusting it on the part or by pressing it upon the part and then rubbing it in. In the cases in which there is torpor of the colon, the boric acid must be used by insufflation.

At first, in the rectal cases, the treatment should be carried out by the physician, but later it may be entrusted to the patient. Insufflation, however, must be done by the physician. For this purpose, a short tube of pretty large bore is inserted into the rectum, and about forty-five grains of boric acid is insufflated by means of a powder-blower. In addition to the cold-water bathing of the anal region before the application, Flatau has the patient rest for a short time after the application of boric acid, in order that the latter may keep its place for a few minutes. In from one half to three hours or longer, after the application, pretty strong peristaltic movements are set up in the large intestine,

and probably the small intestine takes part in them also. As the result of the increased peristalsis, the feces are pressed down into the lower section of the intestine and so are cast out. The stools are rarely watery.

Flatau says he has not failed to secure good results from the boric acid treatment in any of the cases in which he has used it, provided that it was used in suitable cases. He has used it in about forty cases. The most interesting statement of all, is the assertion that the bowel seemed to grow stronger as a result of the use of the boric acid, and that a normal condition of muscular activity of the large bowel was brought about. Three illustrative cases are reported in full.

Such a simple and harmless method of treating ordinary chronic constipation as Flatau has described, can be carried out by any physician, and the results may be as gratifying as those obtained by the use of glycerine in more acute cases. One need not dwell upon what a boon a simple but effective treatment of chronic constipation would prove to be to many who now seem doomed to swallow some purgative two or three times every week. We hope that the boric acid treatment may obviate this, in a measure, at least; and as each of our readers can try it for himself, it should not be long before we shall know definitely its value in chronic constipation. It is for this purpose that we have called attention to it in the REPORTER.

PHILADELPHIA POLYCLINIC.

The handsome new building of the Philadelphia Polyclinic was formally opened April 2, 1891, with ceremonies which were interesting to those who took part in them, and must have been especially gratifying to the members of the Board of Trustees and Faculty of this institution, who have labored so indefatigably to accomplish the result which they now have attained. The Polyclinic has now what is believed to be the finest building in use by any such institution in the United States. It is admirably adapted for the purposes for which it is intended, and is especially valuable as affording unusually good opportunities to medical men for the close observation of medical and surgical cases. It is an objection to some of the most prosperous Polyclinics in this country, that it is almost impossible for medical men attending them to get much better views of operations or closer investigations of individual patients than is now attainable in first-class undergraduate medical schools, with well-supplied clinics. The Philadelphia Polyclinic affords peculiar advantages in enabling those in attendance to come very close to everything which is done, and in many cases themselves to take part in the treatment, as well as in the examination of patients.

It is pleasant to note that the exercises on April 2 indicated that the Philadelphia Polyclinic has the hearty sympathy and goodwill of the undergraduate medical schools of this city. With its new building in full operation, and its well-known Faculty, it is reasonable to expect that it will now rapidly increase in prosperity and usefulness.

Medical men living within convenient reach of Philadelphia, would at any time find it to their advantage to take a holiday, and to spend it here, where, with the Polyclinic and the active Medical Societies of this city, and the professional atmosphere for which it has a widespread reputation, they could not fail to find advantage and pleasure.

TRAINING SCHOOL FOR DEAF INFANTS.

It has been demonstrated that deaf children can be taught speech and lip reading, be educated and be enabled to communicate with their families and friends through the same, and a number of pure oral schools for such instruction are in existence in the United States. To the complete success of the method, however, it is necessary that these deaf children should be guided and

trained to speech from the age when hearing children begin to learn to talk.

As the majority of these children are poor, and as all mothers, even of those who are not poor, do not understand how to train them to speech, Miss Fuller, Principal of the Horace Mann Day School for the Deaf (pure oral), Boston, established, two years ago, a Home for the training in speech of deaf children before they are of school age. The necessary funds for commencing the good work in New England were raised by the mother of a successfully trained deaf child. The children are, of course, under the care of persons specially trained for that purpose, and their progress already gives great encouragement.

It is proposed to establish in the Middle States, as speedily as possible, such a Home as Miss Fuller has established in New England, and the public are earnestly requested to contribute to the Endowment Fund required for the same. The School will be under the management of Miss Emma Garrett, long known for her skilful and devoted labor for the deaf, and more recently as Principal of the Pennsylvania Oral School for the Deaf, which position she has resigned, to take up this new work.

Physicians probably understand the need for such institutions as well as any class in the community, and we feel sure that the readers of the REPORTER—many of whom are familiar with the work already done for the deaf by Miss Garrett—will approve and support the proposed Home, which will begin the work of ameliorating the condition of these unfortunates at the most favorable time.

RESIGNATION OF DR. DA COSTA.

The Alumni and friends of the Jefferson Medical College will receive with regret the announcement that Dr. Da Costa has resigned from the Chair of Practice of Medicine in that institution. The reason for his resignation, is that Dr. Da Costa desires to withdraw from the cares and burdens of the professorial position in order to have more leisure for his large practice. For twenty-seven years, in one capacity or another, Dr. Da Costa has been identified with the Jefferson Medical College, and it is not too much to say that its present exalted position is in a large measure due to the admirable manner in which he fulfilled the duties of his position, and to the lustre of his reputation, which has so effectively supplemented that of Meigs, Gross, Pancoast and others, whose students respected and loved them, and who were justly esteemed and honored by the members of our profession all over the world.

FAREWELL OF THE EDITOR.

On April 30, 1887, Dr. N. A. Randolph and I leased the publication business of the MEDICAL AND SURGICAL REPORTER for a period of ten years, with the right to terminate the contract—at our option—at the end of any current year. Dr. Randolph lost his life in August, 1887, and since then the whole work of editing and publishing has devolved upon me. Now, in accordance with the provisions of the contract mentioned above, I have decided to give up this work on May 1, and I must therefore take leave, as Editor, of those to whom, for nearly four years, I have spoken every week through these columns.

During this time it has been my desire and endeavor to conduct the REPORTER so as to advance the interests of its readers and to support the honor and dignity of the medical profession. More than once I have acknowledged recognized errors of judgment, and others unrecognized have no doubt occurred ; but I trust that, while under my control, it has helped those who read it, has supported no unworthy cause and has opposed no good one. I have felt, while Editor of the REPORTER, a very warm interest in the welfare of those thousands of its readers whom I have never known personally, and especially in that of those who live far from large centres of population.

For the faithful and laborious practitioners in the country, I have acquired a respect and regard which has increased with each year of my connection with this journal.

To all—in city, town and country—and to my editorial colleagues throughout the land, from whom I have always received courteous treatment, as Editor of the REPORTER, I now say, Farewell.

CHARLES W. DULLES.

BOOK REVIEWS.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the REPORTER.]

TWELVE LECTURES ON THE STRUCTURE OF THE CENTRAL NERVOUS SYSTEM, FOR PHYSICIANS AND STUDENTS. By DR. LUDWIG EDINGER, Frankfort-on-the-Main. Second Edition. With 133 illustrations. Translated by Willis Hall Vittum, M. D., St. Paul, Minn. Edited by C. Eugene Riggs, A. M., M. D., Professor of Mental and Nervous Diseases, University of Minnesota, etc. 8vo, pp. xii, 230. Philadelphia and London: F. A. Davis, 1890. Price, $1.75.

An idea of the scope of this book can best be given by mentioning the subjects of the twelve lectures which form it. These subjects are: A review of the history and methods of investigating the central nervous system; embryology and comparative anatomy of the brain; the general conformation and histology of the brain; the convolutions and fissures of the surface of the cerebrum; the cortex and fore-brain, the white substance of the hemispheres, the commissures and the corona radiata; the corona radiata, the corpus striatum, the thalamus and the subthalamic region; the structures at the base of the brain; the corpora quadrigemina and the origin of the optic nerve; the pons and the cerebellum; the roots of the peripheral nerves, the spinal ganglia and the spinal cord; the spinal cord and the commencement of the medulla oblongata; the medulla oblongata and the tegmentum of the pons; the pons; final review.

It will be seen that the lectures cover very completely the subject of the structure of the central nervous system. The illustrations are very clear and helpful. In most cases they have the German anatomical names upon them, but as these are explained beneath the illustrations, no confusion is created in the reader's mind; indeed, to a person with some knowledge of German, it is interesting to have the exact German equivalents of well-known English anatomical names. Altogether we think the book will be valuable to the specialist in nervous diseases, and especially to one who is a student of cerebral histology.

PRINCIPLES OF SURGERY. By N. SENN, M. D., Professor of Principles of Surgery and Surgical Pathology in the Rush Medical College, Chicago, Ill., etc. Large 8vo, pp. xiii, 611. Philadelphia and London: F. A. Davis, 1890. Price, cloth, $4.50, sheep, $5.50.

This handsome and well-illustrated book contains an exposition of the principles of surgery different from what has been usual in works on this subject. The difference is due to the great amount of space given to discussing the *rôle* played by micro-organisms in the various morbid processes coming within the domain of the surgeon. Pus, for example, is not described by its color, smell and taste, but—in addition to some of these—by its chemical and microscopical characteristics. Septicemia is divided under a number of heads, each of which is identified by the presence of a definite bacterium. So through the whole list of subjects considered—it is the bacteriological side which gets most study. The result is a book quite different from the general run of books in the English language on surgery, and a book for which there is a place in most libraries.

Dr. Senn has done his work well, having great familiarity with surgical literature, and an abundant clinical and experimental experience. His book is both interesting and instructive, and has been well printed by the publisher.

LITERARY NOTES.

—J. B. Lippincott Company will, beginning with April, issue quarterly thereafter, a work entitled "International Clinics." This work will comprise the best and most practical clinical lectures on medicine, surgery, pediatrics, gynecology, dermatology, laryngology, ophthalmology and otology, delivered in the leading medical colleges of this country, Great Britain and Canada. These lectures have been reported by competent medical stenographers and thoroughly revised by the professors and lecturers themselves. The object of the work is to furnish the busy practitioner and medical student with the best and most practical clinical instruction in concise form. Each volume will consist of over 350 octavo pages, illustrated with photographic reproductions of important cases.

CORRESPONDENCE.

Electricity and Pelvic Surgery.

TO THE EDITOR.

Sir: In your impression of March 21 (page 340), Dr. Horatio R. Bigelow makes some criticisms upon some remarks of mine touching the harmful effects of electro-puncture in treating fibroid tumors of the uterus.

My remarks were contributed to a discussion upon the treatment of such growths, which discussion was introduced by Dr. R. S. Sutton, of Pittsburgh, and afterwards published. Here are my remarks to which Dr. Bigelow makes objection: "Of late electricity has been much vaunted in the treatment of fibroid tumors of the uterus. Dr. Sutton merely mentioned this agent in his paper, probably purposely, because he knows that electricity does nothing towards arresting or removing these tumors. A peculiar feature about the application of electricity in pelvic surgery is that those who a

few years since denied the existence of certain forms of intra-pelvic diseases are now foremost in the diagnosis and treatment of these same diseases by electricity. The application of electricity by puncture is fraught with danger. The speaker has removed a uterine myoma by supra-vaginal hysterectomy, weighing sixteen and a half pounds, in which the entire anterior aspect, which had been accessible to electric treatment, was bound by dense adhesions to the omentum, intestines and abdominal walls, etc."

Dr. Bigelow pronounces the above to contain some "peculiar points," which points he takes up *seriatim* as follows:

"(1). Dr. Sutton, if acquainted with the statistics and history of gynecological electro-therapeutics, will not feel flattered at this surmise. The unimpeachable cases on record in which tumors have been arrested by electricity, are numerous and quite as reliable as are any statistics ever brought forward by any surgeon. If Dr. McMurtry does not know this—his argument would be akin to that of a 'lightning bug' who never owned a battery—if he does know that such claims are made, but refuses to accept them because they antagonize pet theories of his own, it is not polite to give utterance to such doubts, since men of equally honorable standing with himself have seen and reported such cases. I have seen quite a number 'reduced,' and so can any one else see these cases if he will. I have never seen a fibroid *disappear entirely*, but other men have, and I believe them. It is 'foolish talk' to reiterate all this, because all of it is a *fact*.

"(2). In no branch of medicine has a greater change taken place than in the pathology of female pelvic disease. What became of all these modern, high-sounding diseases, and of the women who had them, before the modern laparotomist was incubated? Who condemned abdominal surgery, not very long ago, but the surgeons themselves? Did women die of these diseases then, as they are since laparotomy has become a fashionable '*fad?*' It *is* nice of the doctor to give the 'lightning bugs' credit for recognizing and diagnosticating these troubles, early in their history, and for establishing a conservative system of treatment.

"(3). This objection is a mere will-o'-the-wisp of the doctor's fashioning. I am speaking, of course, of a puncture in the hands of those competent to make use of it. In the clinic, conducted by Dr. Massey and myself, cases are punctured, high intensities being used, and the patients go to their homes one half hour afterwards. I do not advise this, but with such absolutely poor people, and with no beds at our disposal, we have no alternative. I *have never seen* any bad results following a fibroid puncture, and my experience has been an ample one. But even were it possible to show that such a process is attended with danger, what is the value of such an objection? Is not laparotomy — the alternative — a dangerous operation?

"(4). Dr. Baldy, than whom no man of equal age stands higher in the surgical literature of this country, told me only a few days ago, that he very rarely if ever had opened the abdomen for the removal of tumors, without finding extensive adhesions, and that a large majority of so-called pus-tubes were simply cases of chronic adherent salpingitis. So that all this rumpus about adhesions—these big tumors—how could it be otherwise, and by what process of ratiocination does one reach the conclusion that adhesions are engendered by electricity?"

In the present state of our knowledge, with the established results of the surgical treatment of uterine fibroids, it seems almost idle to answer such criticisms as the above; but the plea of conservatism (so-called) is so attractive to many, and so very misleading, that the facts should be stated. Permit me to call attention to Dr. Bigelow's first "curio."

In this he says "the unimpeachable cases on record, in which tumors have been arrested by electricity, are numerous." In the same paragraph he says, "I have never seen a fibroid *disappear entirely*, but other men have, and I believe them." Further on, in paragraph numbered 3, Dr. Bigelow states that "my (his) experience has been an ample one." So we have his own testimony, in his own words, that with an ample experience he has never seen a single case of fibroid tumor, in which the tumor disappeared under electrical treatment.

In his second paragraph, numbered 2, he presents a still greater absurdity. After announcing the great advance in the pathology of female pelvic diseases, he says: "What became of all these modern high-sounding diseases, and of the women who had them, before the modern laparotomist was incubated?" The logical sequence of such an interrogation can be best appreciated if we would inquire what result was obtained in

treating ectopic pregnancy before advancing surgical knowledge in the hands of laparotomists made clear the deadly nature of intra-peritoneal rupture, and a safe and efficient method of treatment? The absurdity of this mode of reasoning (if it can be so called) will be apparent if applied to any great advance in medical or surgical therapeutics, or to any scientific improvement, for that matter, in any department of human effort.

In paragraph numbered 3, Dr. Bigelow says he has never seen any bad results following fibroid puncture. In reply to this, I will say that I *have* seen the bad results of such puncture in the form of violent peritonitis and extensive adhesions, directly resulting from electro-puncture in the hands of those who, like Dr. Bigelow, consider themselves competent to make use of such treatment.

In paragraph numbered 4, Dr. Bigelow would seem to be ignorant of the simple fundamental fact that intra-peritoneal adhesions are the result of pre-existing peritonitis. Whatever begets peritonitis will produce adhesions; electro-puncture begets peritonitis at the point of puncture, often extending widely; and hence electro-puncture produces adhesions. No one claims that electro-puncture is the only cause of adhesive peritonitis. It is well known to experienced pelvic surgeons that tapping ovarian cysts with aspirator or trocar always produced peritonitis and adhesions at the site of tapping. Since the practice of tapping has been abandoned, this troublesome complication is much less frequently encountered in ovariotomy. For the same reason, electro-puncture is harmful in its results upon fibroid tumors of the uterus.

Ovariotomy is recognized as the most successful major operation in surgery. The mortality of supra-vaginal hysterectomy for uterine fibroids has been reduced almost to the same point. When treated thus, the results are perfect, the patient being entirely cured and restored to health and activity. A distinguished surgeon in Dr. Bigelow's own city has done thirty-eight consecutive, unselected, supra-vaginal hysterectomies without a death, in cases where the supreme indication was to save life. The operation of removal of the uterine appendages arrests hemorrhage and brings about atrophy of the tumor in less extreme cases, and has a mortality of only two and one-half per cent.

These results of the treatment of uterine fibroids upon sound surgical principles are established facts, demonstrated by the incontrovertible evidence of individual cases and personal experience. The harmful effects in the form, if inflammation and adhesions resulting from electro-puncture, are equally well known; and the inefficiency of the electric treatment has been conceded by many who intelligently and earnestly applied the treatment for a long period of time, and have abandoned it.

Yours truly,

L. S. McMurtry, M. D.
231 W. Chestnut St.,
Louisville, Ky.

Notes and Comments.

Partial Excision of Sternum for Melano-Sarcoma.

Dr. Herman Mynter, of Buffalo, N. Y., reports, in the *Annals of Surgery*, February, 1891, an interesting case of operation for melano-sarcoma of the sternum. He says that while excision of the sternum on account of caries of tuberculous or syphilitic nature has been done quite frequently, excision on account of malignant growths is so rarely performed that neither surgical textbooks nor works on operative surgery mention it. On looking over the literature at his command, he finds only two cases mentioned, one by Koenig, and one by Küster. Koenig's case was an osteoid chondroma which occupied the whole sternum with the exception of the manubrium and the processus xiphoideus. The operation was performed in the following way: Long, vertical skin incision, after which the costal cartilages were severed on both sides from second rib downwards. Thereafter the sternum was cut through, by aid of a saw, below the first rib. The sternum, with the tumor attached, was now lifted up with blunt hooks and carefully dissected loose from the mediastinum. During this proceeding both pleural cavities were torn open, but the tears were closed by pressure with antiseptic gauze until the skin-flap was in position covering the openings. The tumor was adherent to the pericardium, which was removed with success (?). The patient recovered, but died two years later from relapse in the lung.

Dr. Mynter's patient was a woman twenty years old, born in Ireland, who entered the

Sisters of Charity Hospital on November 14, 1890, with the following history: She is a domestic, and has been obliged to do a great deal of sweeping, during which the handle of the broom rubbed against her breast bone. She ascribes her complaint, a tumor over the sternum, to this cause. The tumor first appeared eleven months ago, and has been growing larger steadily until now it is the size of half an orange, and extends from below second to below fifth rib. Four months ago the glands in the right axilla commenced to enlarge and there is now found here a conglomeration of glands as large as two fists, completely filling the whole axilla, but yet somewhat movable. Two months ago the glands in the left axilla commenced to swell, and are now as large as a hen's egg. During the last few weeks the glands in both supraclavicular regions have commenced to enlarge. The tumor over the sternum is immovable, and presents a feeling of false fluctuation; the skin is normal in color and not adherent. She has sharp, shooting pains radiating from the tumor in different directions; has lately commenced to lose flesh, but is yet in pretty good general health. There are no symptoms of any growth in the anterior mediastinum such as hoarseness, difficulty in breathing or interference with circulation.

On November 15, 1890, an operation was done under ether-narcosis. Dr. Mynter made a U-shaped incision, convex downwards, from second to sixth ribs, about three inches wide. The flap was dissected up and the periosteum loosened transversely from the sternum above the tumor in healthy tissue, in order to shell out the tumor from the bone if possible. The tumor was surrounded by a strong fibrous capsule. On a line with the fourth rib the tumor extended into the sternum, and the capsule was necessarily opened here, and there was a discharge of a semi-fluid, black, grumous substance. The rest of the tumor was therefore removed from below upwards, by a similar process. The sternum was found quite extensively involved, presenting an irregular cavity as large as a section of a hickory nut, filled with the black, grumous substance. It was thoroughly scraped out with a sharp spoon. During this proceeding, the posterior lamina of the sternum was perforated. The opening was enlarged with chisels, and from this opening the posterior periosteum was loosened with a curved elevator, and the sternum removed piecemeal with cutting pliers from above the third rib to midway between the fifth and sixth ribs. About one-half inch of the third, fourth and fifth right costal cartilages were removed too, and the pericardium, which appeared healthy, was exposed for about six square inches. The skin flap was thereafter brought into place, and sutured, and a drainage-tube inserted from the lowest point into the cavity left by the removal of the tumor and the sternum. The enlarged glands were thereafter removed from both axillar and supraclavicular regions, drainage-tubes or catgut drains introduced, sutures inserted, and antiseptic dressings applied. The operation lasted two and one-half hours.

The further course was favorable. The temperature rose for a couple of days to 101° in the evening. The respiration was difficult and painful for some time until she learned to use abdominal respiration. The drains were removed on fifth day, and on the tenth day the wounds were healed and the patient allowed to sit up. She left the hospital on the fourteenth day, and so far, ten weeks after the operation, has no symptoms of relapse; she has gained twelve pounds in weight, and gone to work again as a domestic.

The operation performed differs from the one described by Koenig. He tried to extirpate the sternum *in toto*, and managed by that proceeding to tear open both pleural cavities. It is scarcely possible to have this accident occur when we first trephine the sternum, and then remove it in pieces with cutting-pliers. Dr. Mynter could, with the greatest ease, have removed the whole sternum in this way, but he stopped, of course, when he met healthy bone-tissue. The tumor being a melano-sarcoma, will, of course, return, and eventually kill the patient, but if it had been removed half a year earlier, before the glands were enlarged, there might have been better prospects of a permanent result. Dr. Mynter says he was severely criticized by several physicians for attempting the removal, they being of the opinion that such an operation was "little short of murder."

Medical Legislation in Missouri.

The *St. Louis Medical and Surgical Journal*, March, 1891, says: State Legislatures have always been "a source of innocent merriment," as the Mikado puts it. Our own is no exception to the rule. In fact, it seems that since the Farmers' Alli-

ance is in practical control of the House of Representatives, our lawmakers have let their fancies run riot. They do not seem to know what law is and they furthermore indulge in the fascinating self-deception that they can pass such enactments as seem most pleasing to them, irrespective of Constitution or any other such small hindrances to their untrammelled action in the premises.

One bright particular star, no doubt, has fallen into the clutches of a doctor at some remote period of time. This is the only way we can account for a remarkable action he committed not long ago in the introduction of a bill whose chief feature is the amusement it caused. We want every one to distinctly understand that this happened in the broad commonwealth of Missouri, and not in one of the effete States bordering upon the Atlantic Ocean. If we are going to have sample idiots we want them of the monumental kind, and we have one and we want to keep him as a sample. He imagined that an idea had struck him and he forthwith formulated a bill, the principal features of which provided for the regulation of the fees of physicians. The schedule is quite a liberal one, considering the source whence it emanated. Calls are not to exceed $1.00 each, and office consultations must not be charged for at a greater rate than fifty cents each. There are some other equally lucid provisions to the literary curiosity, but we forbear from enumerating them.

Our State Board of Health not long since held its annual meeting and the subject of medical education came up incidentally. Some of the members stated it as their firm and unalterable conviction that no diploma should be recognized unless the college issuing it required its possessor to have attended three courses of lectures in one or several reputable medical schools. Others of the members of the same Board gave it as their opinion that an attendance upon two terms of lectures was all-sufficient. To arrive at a definite conclusion it was decided to have a vote. When the result of the ballot was announced the discovery was made that the Board was evenly divided upon the question, with no hopes of obtaining a majority for either side of the question. What to do in such circumstances might have puzzled others, but the Missouri State Board of Health cut the Gordian knot and solved the difficulty in a very simple manner. The whole matter was referred to the State Legislature and it has been resting there ever since. We presume that it needs a prolonged rest and will get it. Our Solons are not particularly anxious to wrestle with the question and there seem to be indications that it will quietly slumber into non-existence unless some vigorous means be pursued to resuscitate it into the semblance of life.

We are certain that there will be other features of a medical character brought out in this Legislature before it adjourns. The Social Evil bill has a few; but what we want is a good, genuine "way-back" medical law (that won't hold water). We need it, as physicians are so thoroughly incompetent to manage their own affairs that they need the kindly and protecting care of the farmers to help them along.

Albuminuria in Acute Catarrhal Enteritis.

Dr. A. A. Netchæff (*Bolnitchnaia Gazeta Botkina*, states that there is very little said about albuminuria in acute enteritis in medical literature, although it is a very important subject. Works of a number of authors are quoted, one of whom reported twenty-five cases of cholera nostras, in nineteen of which there was albuminuria in various degrees, which disappeared in from two to three days. Bacteriological investigations revealed the presence of five different micro-organisms in the intestinal secretions. As a rule, it is alleged, it is hard to trace out the provoking cause of enteritis. Often the patients state that unwholesome food was taken, but frequently they cannot account for the condition. It is always unknown, the author says, what was the condition of the intestinal tract previous to the manifestation of the series of symptoms and—what is very important—what was the condition of the foods thought to be wholesome.

Three hundred and four cases of acute enteritis are mentioned which the author treated in his hospital. In sixty-five cases of those, the affection was traceable directly to the quality of the food used, and seventeen cases of the sixty-five had decided albuminuria. In the cases of enteritis without any traceable cause, albuminuria was not marked, in either per cent. or amount; in cases with chronic kidney affections the albuminuria was increased, and there was a decided acute renal exacerbation during the attack of enteritis. The number of *post-*

mortem examinations of the patients who succumbed to the enteric attacks convinced Netchæff that the kidneys suffer more or less, and the food is considered to be the source of the supply of poison to the system in general. In a few cases indican was found to be present simultaneously with albuminuria in enteritis. As indican appears usually during decomposition of matter especially in the small intestine, and as the presence of indican coincides with temporary albuminuria in enteritis, it is evident that both are provoked by decomposing matter in the intestine.

Netchæff concludes by saying that the acute exacerbations of renal disease during an enteric attack rarely passes off without leaving some impression on the already affected kidneys, and that in some patients who have not the choice of their food certain renal affections could probably be traced to the latter.

Ways in which Syphilis may be Spread.

Dr. Holcombe writes in the *International Dental Journal:* "I recollect an instance that occurred on board the same ship with Horace Greeley's wife. Her little child was taken up by a stranger and kissed. The mother took the child from him and said: 'Sir, I do not allow you or anybody to kiss my child.' She took her handkerchief and spat on it and rubbed the lips off. This kissing business is often perfectly terrible in results. Some nurses kiss a child on the lips, and kiss it on the nose and ears and kiss it all over: and I have not the least doubt that syphilis is conveyed to many innocent persons by this habit. I should like to ask if the dry powder of syphilitic chancre, having been rubbed off, like vaccine virus, and blown through a room, would, by being inhaled, be the means of communicating syphilis. I heard Ricord once say that many cooks would communicate syphilis to a whole family; the cook would have a sore on his lip and would not think anything about it, and he would taste the different dishes and put his fingers into them—and all know the French cook has a habit of handling the meat with his fingers—and many people undoubtedly have contracted syphilis from food handled by cooks. It was the old-fashioned way in hotels to have the towels on a roller for the common use of guests, and I remember once on a steamboat there was a tooth brush for the whole crowd. I have no doubt that tooth brushes sometimes used by several younger members of a family have been the means of communicating syphilis. I have had many patients come to me and say that they caught the disease from a water-closet, and I have no doubt that many cases of gonorrhœa and syphilis can be thus communicated. I think they should be under direct sanitary inspection, just as much as the foul air that comes from the sewer. Not long ago I was in a cigar-maker's establishment and I noticed that every cigar-maker, when he finished the end of a cigar, wet the forefinger and thumb with his lips to point it nicely. I wondered at the time if he had a lip-chancre; and I question if the disease has not been given to many persons in that way. I know of a case where, a few days ago, a lady kissed every female in the room, and one of the persons in that room I know had syphilis. Some people make a business of kissing everything, kissing animals, birds, dogs and cats, and it is very suggestive of the transmission of disease. The habit of putting money into the mouth, that some people have, is one that might lead to syphilitic infection. A butcher or grocer will often hold a half dozen bills in his mouth, and grown people will put silver pieces and pennies into their mouths; and I have wondered that the habit has not been more productive of disease than we have observed. At all events it is well to have our attention and that of the public called to the means of contracting syphilis and other diseases."—*Druggists' Circular*, March, 1891.

Burial of So-called Stillborn Children.

The *Lancet*, March 21, 1891, calls attention as follows to a matter of importance in this country as well as in Great Britain. "The question recently asked by Dr. Cameron in the House of Commons respecting the interment of stillborn children, and the reply of the President of the Local Government Board, call for more serious attention than it is likely to receive. Dr. R. Rentoul has just issued a pamphlet in support of his active opposition to the Midwives' Registration Bill, in which he states that he has ascertained by personal inquiry that during the year 1889 there was interred in seventy-one burial board cemeteries, as stillborn, the bodies of 6,321 infants; and that there are

no fewer than 1,100 such board cemeteries in England, in addition to the parish churchyards, in which the proportional number of this class of burials is supposed to be larger than in cemeteries under the control of burial boards. Dr. Cameron, knowing the very loose and unsatisfactory system under which stillbirths are certified for burial purposes under the Births and Deaths Registration Act, 1874, asked the President of the Local Government Board for a return of the total number of infants interred as stillborn during 1890 in England and Wales. The answer to this question obviously suggested by the facts of the case was that, as there is no system of registration of stillbirths in England and Wales, it would be impossible to furnish the return asked for. It is seriously to be regretted, however, that the importance of this subject, from many points of view of deep public interest, did not suggest the possibility of providing some remedy for an evil which amounts to a grave public scandal, rather than suggest the assertion of a simple *non possumus*, a position too readily assumed by Government departments as a foil to suggested reforms. It is needless now to enumerate the many evils that arise from the present loose system of certification of stillbirth; but we may point to one which is but too likely to be overlooked—its effect upon vital statistics which constitute one of the most powerful and stimulating factors of health progress. Vital statisticians have in recent years been startled by the constantly rapid decline of birth-rates and of death-rates. It is obvious that so-called stillborn children are not recorded in the birth or death registers, and in the interests of trustworthy statistics, it is therefore of real importance to know what truth there is in the assertion of the amount of interment of so-called stillborn infants that is going on around us, practically unknown and unchecked. The results of Dr. Rentoul's private inquiries are striking enough to call for Government inquiry; and there seems to be only one real difficulty in the way of such an inquiry. This difficulty is the apathy of the Government in the matter. All burial grounds and all burial authorities are, it is supposed, under some kind of control exercised by the Home Office. Why then should not the inquiry, so urgently needed and called for, be undertaken by the Home Office? and why should not all burial authorities be required to furnish annual, or more frequent, returns, showing the number of burials of so-called stillborn infants, accompanied by the actual certificates which the Births and Deaths Registration Act, 1874, requires, as authority for the burial of any child as stillborn? Such a course would supply the means for a kind of registration of stillbirths, and would also prove a real check upon the gross abuses of the present system, which are very generally known to exist."

Ichthyol Varnishes.

In speaking of ichthyol as an external application, a reviewer in the *British Journal of Dermatology*, April, 1891, says: One great disadvantage in regard to the employment of ichthyol to limited areas of disease has been the impossibility of applying it in any way that was at once easy and efficacious. The pure drug, apart from its unsightliness and objectionable odor, will not dry, even if spread in a thin layer, but remains for hours moist and sticky, and the various combinations with dextrin, gum and gelatin-glycerine paint have been found in practice to be inefficacious. Ichthyol collodion promised better, but the irritation which is caused by removing it is such as to more than counterbalance its beneficial effects. In the case of patients who are only able to follow out treatment at night the removal of these firm adhesive layers each morning, therefore, renders their employment impossible. In order to overcome this difficulty and to produce an impermeable layer of ichthyol, which could be easily and quickly removed without irritating the skin, Unna instituted a series of experiments in conjunction with Dr. Helmers, and arrived at the following formula, which he finds to answer his purpose fully:—

Ichthyol	40 parts (by weight).
Starch	40 parts.
Albumin solution concentrated	about 1–1½ parts.
Water	ad. 100 parts (*i. e.*, about 20 parts).

The constituents must be mixed in definite order, the starch must be moistened with the water, the ichthyol then rubbed well in, and finally the albumin must be added. The concentration may be regulated by the thickness of the layer, the first application being wiped off with a moist cloth so as to leave the finest possible coating. Even a thick layer drys very rapidly, and can be washed off at any moment.

An ichthyol-carbolic acid varnish having the same properties can be made in a similar way, but, of course, with the omission of the albumin. The formula is:—

Ichthyol	25 parts.
Carbolic acid	2.5 "
Starch	50 "
Water	22.5 "

The ichthyol and carbolic acid are dissolved in the water in a gentle heat, and the starch then added.

The first preparation, *vernisium ichthyoli*, is recommended in acne where the skin is irritable, in rosacea seborrhoica, and in rosacea simplex, in ulerythema centrifugum (one form of "lupus erythematosus"), intertrignes, tubercular eczema, seborrhoic eczema and erysipelas. It may with advantage be made a basis of other reducing and antiparasitic substances, such as chrysarobin (2.5 per cent.), which may in this form be applied with confidence to the face, pyrogallol, resorcin and sulphur, for the treatment of parasitic diseases, such as certain eczemas and psoriasis. But in this case it is better to mix, for every quantity of new substance added, an equal quantity of linseed oil, which is at once a reducing agent and a rapid seccative.

Bad Effect of Poultices for Spreading Ulcers.

Surgeon R. Ross, of Bangalore, writes in the *Indian Medical Gazette*, March, 1891, that in October and November, 1889, being then in Upper Burmah, previous to proceeding on the Chin Lushai expedition, he had the opportunity of treating a large number of cases of spreading ulcer on the feet of mule drivers attached to the force. These ulcers were of an alarming nature, spreading rapidly sometimes to the size of a saucer and even burrowing between the bones. Several deaths occurred in neglected cases, and in one case amputation of the foot was necessary. The sores were evidently microbic, and were of the same nature as the spreading sores on the backs of some of the mules. Flies probably carried the infection, but the mules' hoofs appeared, by the result of kicks, to be much imbued with the poison. The sloughing action implicated as a rule only the true skin, and in one night a quarter of an inch of tissue would be destroyed. The treatment was at first the usual—nitric acid, hot poultices and opium—but in many cases Dr. Ross was obliged to leave off the hot poultices owing to the great pain they caused. In a few of his last cases he was astonished to find that the sloughing ceased when the sore was dressed simply with a wet piece of lint placed upon it. At the same time he was informed by the Veterinary Surgeon of the expedition that those mules whose sores were left undressed often recovered marvellously.

At the end of June last, Dr. Ross was called to see a woman, sixty-nine years old. She was suffering from two bruises, one on the right shin, the other on the inside of the left ankle. The skin over both bruises had mortified to the size of a shilling. The wounds long remained in a quiescent state, being only lightly brushed with oil. At last, in order to stimulate them, hot poultices were ordered. The skin now rapidly broke, showing a foul ulcer beneath. They were both cleaned out with pure carbolic acid and poultices were continued. The upper and slighter wound healed shortly, but the lower spread in resistance of frequent carbolic acid swabbings. At last, when the ulcer had become two and one-half inches in diameter, nitric acid was applied to the sloughing tissue (there was a white, evidently microbic, infiltration of the true skin causing the slough). The neighboring parts were perchloridized, and carbolized charcoal poultices were applied. Next day Dr. Ross found that the sloughing had continued as if nothing had happened. Moreover, a minute drop of acid had fallen from the pipette on to the healthy skin one-half inch from the edge of the wound. The sloughing had commenced in this spot also. This did not argue well for nitric acid. Finally, in despair, he determined to leave off the hot poultices; and the sloughing action ceased from the moment the last poultice was taken off, and the ulcer completely healed. Dr. Ross thinks that the nitric acid failed for one or both of these two reasons: 1, it is known that microbic infiltration is often very extensive in the neighborhood of microbic lesions, so that the destruction of tissue by nitric acid would have to be very great to be effective, too great, in fact, for the present case; 2, many recent investigations have shown that microorganisms which may exist quite harmlessly in the blood will immediately attack an injured part, say a broken bone. It is obviously useless, therefore, to apply nitric acid to a wound when the malignant organism

comes from the blood itself. In this case the fallen drop of acid itself immediately started a new circle of disease. The reason why poultices may be bad is that they maintain exactly the conditions of warmth and moisture necessary to the growth of the pathogenic organism.

Tuberculosis Treated with Hypodermic Injections of Iodoform and Guiacol.

Dr. Picot, Physician to the Hôpital Saint André, Bordeaux, at a recent meeting of the Académie de Médicine, Paris, read a long and highly interesting paper on the above subject, the following abstract of which is taken from the *Medical Press*, March 25, 1891.

For the last two months the author had been making experiments at his Clinic in the Hôpital Saint André, at Bordeaux, on the treatment of phthisis, but before proceeding to describe the treatment he followed, he wished to declare that he did not bring forward a cure for the disease, for in his opinion, and in that of his colleagues, the day has not arrived when it might be affirmed that an infallible remedy for pulmonary tuberculosis has been discovered. There are patients, with whom no treatment will succeed, for no therapeutic methods could reorganize lungs that have been destroyed by the ravages of the disease. Lately an example of the absurdity of therapeutic conceptions pretending to cure tuberculosis in a general sense has been before the world. Dr. Picot was much more modest in his pretensions, and desired only to relate the result of his treatment of pulmonary tuberculosis and pleurisy of the same origin. He would remind his colleagues that, as the illustrious Trosseau had affirmed, pleurisy is, in the large majority of cases, of tuberculous origin. The therapeutic agent which he was bringing before his colleagues was a mixture of iodoform, guiacol, olive oil and liquid vaseline. The solution is perfectly transparent, and each hypodermic syringe contained one-fifth of a grain of iodoform and one grain of guiacol. The liquid as indicated was employed in subcutaneous injections, and the position chosen was the supra-spinal fossa as it is a point free from any compression.

The first condition, said the author, which imposes itself on the therapeutist in the use of an agent, is not to do any harm, *primo non nocere* is the old adage, and which ought to be respected even in this daring age. He affirmed then at the outset, that the injections of the liquid gave rise to no evil consequences, neither locally nor generally. At the point of injection no redness or swelling occurs, nor is the part painful. The absorption of the medicine is proved by the fact that it appears in the urine not, however, as iodoform, but as iodide of potassium, on the third day after the injection. As to the general effects of the injection, they were never hardly noticed except when the patient had fever, and then appeared as profuse sweating over the whole body, which set in about a half an hour after the injection, and lasted one or two hours. When past, the patient felt a *bien être*, and the fever lowered one degree. Examining the therapeutic effects of these injections, Dr. Picot said that all his experiments were made openly, before all his students and several army and navy doctors, so that all was done above board. Twenty-five patients were treated up to the present, of whom fifteen were men and ten women, of this number three succumbed, as they were in the last stage of consumption, the fever in no way being abated by the injections, but each of them expressed themselves as better for the treatment, and the expectoration diminished considerably in quantity. The *post-mortem* showed, however, the good effects of the injections in the fact that the vomicæ were found dried up, the caseous secretion was entirely absent. All the other patients were in the second stage of the malady. One of them, a man, 54 years old, entered the hospital in October last. His father died from consumption. This man had coughed for the last year. On examination, the chest showed dulness in the subclavicular regions on both sides, and on the right side sibilant râles; bacilli were discovered in the expectoration. The injections were commenced in January, and immediately the patient felt better, the expectoration diminished and the body gained in weight. At the end of a month sonosity was well marked at the seat of former dulness, and all râles had disappeared, while the respiration became normal. A week subsequently the man left the hospital in a very encouraging condition. The injections were made every day, at the dose of three syringes.

Another patient, 35 years old, entered the hospital in the middle of January, four

years previously he had a pleurisy, which lasted two months, last year he had the influenza and coughed ever since. He was very emaciated and suffered from night sweating and fever. He spit a great deal, and bacilli were found in the expectoration. Auscultation revealed the existence of skodic murmur on the right side and dulness and râles in the third intercostal space. On the left side broncophony was noticed and other symptoms, leaving no doubt of the character of the affection. On January 20, the injections were commenced at the dose of a syringe a day, forty-eight hours afterwards the expectoration diminished by two-thirds. Three injections daily were then practiced with the result, that in a week the patient expectorated no more, and the cough had totally ceased. On February 9, he quitted the hospital quite satisfied, although the skodic murmur persisted, all râles had ceased and sonosity had returned in the points of dulness. After passing more briefly in review several other cases which terminated in a similar satisfactory manner Dr. Picot said that, although the results must be admitted to be very encouraging, he was far from pretending that he had discovered a cure for the disease. It is well known how reserved one ought to be in such cases, and how difficult it is to affirm that a patient is cured. In order to be sure of it, the case should be closely watched for years. But with the treatment he had been following for the last three months, he obtained such results as to lead him to believe that it was possible to arrest the progress of the disease. In any case for the thirteen years that he had been teaching medicine in the Bordeaux Faculty, he never arrived at the success he has experienced by the treatment he had just explained. By these injections the general condition of the patient was greatly improved, the expectoration and the cough ceased, as well as the fever and the night-sweats, and the vomicæ in certain cases dried up, all crepitation disappearing. Is it a cure, asked, in conclusion, the author? Time alone can tell, but up to the present he was happy to have been able to give some hope to so many unfortunate patients.

The formula used is as follows:

℞	Iodoform	grs. vj
	Guiacol	grs. xxxij
	Olive oil	ʒiv
	Liquid vaseline	ʒiv

A hypodermic syringe of this solution contains one-fifth of a grain of iodoform and one grain of guiacol. One to three injections daily.

Diagnosis of Whooping-cough with a Tube in the Trachea.

Dr. James Finlayson, physician to Glasgow Western Infirmary, reports in the *Archives of Pediatrics*, April, 1891, the following interesting case. A boy, six years old, was admitted to the Royal Hospital for Sick Children, Glasgow, on November 6, 1888. He was in such distress from urgent dyspnœa, due obviously to laryngeal obstruction, that in about an hour after his admission tracheotomy was performed by Dr. Hector C. Cameron. The breathing was at once relieved. After the operation the boy seemed to do well enough, but he continued to have a very troublesome cough, which was supposed to be connected, in part at least, with the irritation of the tube, etc. On the eighteenth day the tube was removed, and he did well enough without it. The cough still continued. After the removal of the tube the peculiar character of the cough began to excite suspicion, and in three days the resemblance to whooping-cough became so great that his removal to the isolation ward was ordered; in another three days the diagnosis was complete, and he was removed to the whooping-cough wards of the Fever Hospital, on November 30. The report from there was that the case proved to be a mild one; the tracheotomy wound healed in a few days, and he was dismissed well on January 12.

Inquiry of the parents elicited the fact that others in the family, as well as this boy, were affected with a cough, which, after the patient's admission, had developed the character of whooping-cough in them also.

The case was, no doubt, one of whooping-cough, complicated with laryngitis, suddenly presenting a grave form of obstruction. The idea of whooping-cough never entered my mind till after the tube was removed from the trachea, although the irritating sound of the coughing, with the air rushing through the tube, was heard repeatedly, and its cause could not be ascertained on physical examination of the chest. Of course the presence of a tracheotomy-tube necessarily interfered with any manifestation of the spasm of the glottis, on which we rely for the most characteristic sign of this disease. The effect of the tube completely misled the diagnosis.

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Clinical Lecture.

COMPLETE PROLAPSE OF THE WOMB, BLADDER AND VAGINA, TOGETHER WITH AN EPITHELIOMA OF THE LATTER.—PAROVARIAN CYST.—ADHERENT PLACENTA.

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Gentlemen:—The first case I bring before you is that of a woman who has come from a distance to see what can be done for her. She is sixty-three years of age and has been a sufferer for a long time. Her condition is truly distressing. In merely taking a glance at her, I can see that she has an arcus senilis, and that the calcareous degeneration of her blood-vessels is quite marked. Moreover, she is emaciated and broken down.

Upon inquiring into her history more closely, I find she has been married, when she was a young woman; that her husband is still living; that she never has had any children; and, that her genital organs have been in this prolapsed condition since she was a girl. Cancers of the cervix generally come from lacerations, which latter, from being the seats of fungous degeneration, become worse and worse, until malignant disease is developed; so that old maids have fibroid tumors; mothers have epitheliometa, and sterile wives have ovarian or tubal disease. Of course, these statements are very broad ones, and are subject to many exceptions.

In the present instance, the facts that the bladder is completely prolapsed and that the urine is constantly dribbling over the vagina are the two main local causes in the production of the epithelioma here noticed; but I cannot tell to what extent they have contributed to this effect, nor why the growth is situated on the left inferior wall of the vagina, as it now stands in its inverted condition.

The pain that she has suffered from this growth has not been very great nor has it been constant; because the vagina is not a very sensitive part, nor is the cervix uteri. Therefore, epitheliometa and such growths on these parts are misleading; they are often overlooked for a long time, and the patient may allow them to go on, until she is aroused to her condition by the fœtor, bleeding, and her more or less impaired health; she then applies to a physician who insists upon a thorough examination and finds that the disease has so far advanced that he can do but little beyond rendering the balance of the patient's life more comfortable.

When the disease occurs within the uterus, the amount of suffering occasioned may be truly distressing, and it is useless to restrain the patient from the free use of opium or from anything else that may afford relief. (The patient was here removed.)

In dealing with this woman I told her the truth and nothing but the truth; yet I did not tell her the whole truth, because I was afraid that the shock and the distress occasioned thereby would be too great for her. I informed her that she had an epithelioma, and that any operation at her age would be almost useless.

My treatment will be to apply to the foul-smelling surface, a piece of lint or cotton, wrung out of a one to four thousand solution of the bichloride of mercury, in order to lessen the danger of systemic poisoning, and also, to destroy the fœted odor. The stench that clings to the hands of the surgeon from merely being in contact with such diseased structures is truly disgusting, and the method I resort to in my own person to destroy it, is this: I begin my course of disinfection by washing my hands in soap and water; I next wash them in turpentine, ether or alcohol,—whichever one happens to be most convenient. I then give them another washing in

soap and water, and finish my course of antiseptic cleaning by rinsing them thoroughly in a one to five hundred solution of the bichloride of mercury. All these precautions should be taken in going from one patient to another, lest disease germs be carried, and we thus become the seat of infection to those whom we wish to cure. The clothes may also carry germs, so that they should always be protected during our operations with gowns or aprons, which have been rendered surgically clean for this purpose; or, what is best, let our outer garments, at least, be changed, before going from an infected patient to another.

In the present case, I shall advise that it be suggested to her physician, so soon as she returns home and is well rested, that he apply to the ulcerated part, a solution of fifteen grains of the bichloride of mercury in one ounce of flexible collodion. This will cause a slough, leaving a clean surface more amenable to treatment than is the present one. She is also to be placed on the use of arsenic, beginning with one drop of Fowler's solution and gradually increasing that amount until she reaches as much as fifteen minims after each meal, or until the stomach rebels. The manner in which this drug exerts its beneficial effect is by means of its alterative action. Of course, I do not practically understand much about what this means, but I do know from a long clinical experience, that the remedy does good; and I can here recall the case of a man who submitted to numerous operations for an epithelioma of the lip, and who was finally permanently cured by a course of this medicine.

PAROVARIAN CYST.

The next case, is that of a woman, aged forty-two years, who has been married eighteen years, and has given birth to nine children. Eighteen months ago she suffered with aphonia, which must have been the result of some nervous trouble. She was also, a short time since, in bed for four weeks, during which time she did not suffer much pain, but, four times she managed to pass, from the vagina, as much as a bucketful of clear semen. After each of the aqueous discharges, the swelling of the abdomen became less for a while, at least; her other symptoms subsided, and she became very much better.

There is but one avenue from the abdominal cavity to the vagina, and that is through the Fallopian tubes. It is impossible to believe that the growth noticed in this case is a tubal tumor; because such tumors are smaller, and give more pain than this one has caused. Now, at times, an ovarian cyst is communicable with the tubes, and this will explain these repeated emptyings and refillings, resulting, too, in so little systemic disturbance. But, whatever it is, I shall now begin a systematic examination, in order to find out.

In the first place, I must decide whether the abdomen is enlarged from the presence of something really within and distending it, or whether this enlargement be merely owing to increase of fat in the abdominal walls. This latter fact is always to be borne in mind, because it is a rock upon which young physicians sometimes go astray. About the climacteric, a woman begins to dodge her periods, or to miss them altogether. She increases in abdominal size, and imagines herself to be pregnant; if she be a multipara, having the same signs and feelings as she did at her previous pregnancies; or, if she be a primipara, experiencing them with even greater evidences than ever did her more fruitful sisters. Arrangements are made for the birth, which, however, does not take place. The family is disappointed, and the young doctor is mortified. This occurrence once happened in the life of an English Queen, much to the disappointment and even disgust of her political party, which was looking to her for an heir. How, then, am I to determine whether this enlargement is from a distension within the abdomen, or whether it is merely from a thickening of the abdominal walls? It is done in this manner: I press with one hand deeply on one side of the abdomen, and then strike the opposite side with my other hand. I can feel the thrill of the vibrations as they are transmitted through the fat. But, by getting my assistant to put his hand between mine, the thrill that is transmitted only by the fat is stopped. The vibrations in the substance below, or through the underlying strata are still transmitted; but they are deeper and they vary from the fat vibrations. The difference in the time or intensity of the transmissions of the vibrations helps me to tell also whether I am dealing with a fluid or a solid tumor; because the speed or fineness of the thrill varies according to the solidity of the transmitting medium. This helps me to exclude a solid tumor, apart from the common senses of touch and of feeling; apart from the double touch, or the necessary consideration of the much more serious symptoms which a solid tumor of any kind would cause.

After arriving at the fact that I have a

liquid to deal with, I next have to decide whether there is a cyst or whether the fluid is loose in the abdominal cavity. I proceed to find this out by this mode of reasoning: If the fluid were loose, there would be dullness in the flanks, as the woman lies on her back, owing to the liquid seeking the lowest position. On the other hand, I would find resonance—as I do in this case—in the umbilical region; because the buoyant intestines would be floated up from below.

Examining per vaginam, I find that there is a small tear on the right side of the cervix. The womb is freely movable and measures plus three inches. Therefore, there is no solid tumor, and not finding any remnants of an ovarian cyst, I can yet state that I have made my diagnosis by finding nothing.

There is but one affection that would present itself as the diagnosis in this case, and that is a parovarian cyst. A parovarian cyst! you say, and what, pray, is that? As yet I am unprepared to answer this question with complete satisfaction to myself; but I know that it is thought to be a dropsy of one or more of the tubes of the parovarian. This word means near the ovary, and the name is given to several tubes on each side, which lie between the ovary and the Fallopian tubes. When one of them becomes cystic, the tumor may cause some pressure upon the ovary and give pain. It contains fluid as clear as spring water. It is highly refractive and greatly magnifies any object placed in the bottom of the vessel containing it. Just here I recall the case of a wife of a physician who had one of these parovarian cysts. It burst seven different times, causing a general collapse, together with the discharge of a large quantity of urine. It was finally removed by me. I would also mention that the fluid in the case of this tumor was slightly greenish. When these cysts collapse they generally leave nothing that can be felt because their walls are so thin. When tapped they may not return, but generally they do and in time they have to be removed. Sometimes this removal can be effected without disturbing the ovary on that side; but usually the ovary is also implicated and has to be removed at the same time. The argument advanced for the removal of this growth is that there is a tendency in some cases for it to become a papillary carcinoma, especially when tapt.

ADHERENT PLACENTA.

The next and last case which I shall bring before you to-day, is a woman, who was delivered of a fœtus, two months ago, and since then she has suffered with metrorrhagia, owing to the adhesion of parts of the placenta, which were not removed at the time of confinement.

The womb measures plus three inches. There is now, and has been, since the labor, considerable bleeding, so I very carefully introduce my fenestrated forceps into the cavity of the uterus and upon removing them, I bring out a piece of the placenta. This immediately stops the bleeding. I now re-introduce the forceps and succeed in getting out another piece of the adherent membrane.

The placental tissue has had during these two months a vital connection, and has, therefore, not undergone putrefactive changes. I have removed a scroll-like placenta after seven months, and have found it undecomposed, because it had been all the time adherent.

My first measurement of the uterus gave me a plus three inches. It now measures four inches. The womb is larger than what it first seemed. Previously, when I introduced my sound, it rested on a piece of the placenta, which I have now removed.

If it be necessary to tampon in this case, I shall plug the cervix—not the vagina—with iodoform gauze, leaving a little piece of it protruding, by which the tampon can be withdrawn at any time. I shall not tampon if I can avoid it, because tamponing interferes with the firm contraction of the uterus.

Be sure to have a fenestrated forceps among your instruments. It is especially valuable after criminal abortions, in which cases, parts of the placenta are so often left adherent for the following reason: In natural abortions the ovum becomes, or rather has become, a foreign body, it has been detached from the endometrium; but in criminal abortions the fœtus comes away, but parts of the membrane remain attached to cause hemorrhage and septicæmia. I often compare the results of a natural and of a criminal abortion with the falling off or dropping of a defective apple, or one that has been stung by an insect, to the violent tearing off of a green apple. The one drops off; the other is broken off. The one has its connection severed by nature's amputation, disease; and is removed so gradually that the parent stem does not suffer. Whereas in the latter case, the fruit is violently torn from the tree and a bleeding branch is left.

Gum chewers' cramp is a muscular incoordination similar to the cramp of writers, telegraphers, etc.

EMPHYSEMA.—GRIPPE AND ITS COMPLICATIONS.—CHRONIC HYPERTROPHIC CIRRHOSIS OF THE LIVER.

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Emphysema.

Gentlemen: I present to you to-day a man 52 years old, a laborer by occupation, who says that he was in good health and able to do his usual work until six months ago, when he began to develop symptoms of catarrh of the nose and throat, and, also, some bronchitis. He has a cough, complains of dyspnœa on exertion, and has palpitation of the heart. From the time he speaks of, that is six months ago, he has been getting steadily worse, and has been losing considerable flesh and strength.

On observing this man, we find that he is badly nourished, and has the expression of a person who is suffering from some real illness. Examination of the lungs gives us the physical signs of emphysema, with pleuritic adhesions over the top of the left lung. His heart is distinctly hypertrophied and dilated, but I can find no murmur present. He has a large heart, perfectly regular and forcible enough in its action and, if anything, a little exaggerated. There is some thickening of the radial and temporal arteries. He has a full and rapid pulse, but without any increase in tension. His urine has been examined a number of times, has a specific gravity of 1017, but contains no albumen.

The diagnosis of this man's trouble is by no means clear to me. He has evidently emphysema, but emphysema of itself is not sufficient to account for his present condition. There is no apparent change in the valves to any considerable extent, there is no evidence of any kidney lesion, no contraction of the arteries, nothing in fact very obvious to account for this marked increase in the size of his heart.

We might suppose this patient to have a chronic nephritis, but he should then have a heart simply hypertrophied, and not dilated and hypertrophied at the same time. We might suppose he has a chronic endo-arteritis, but then also there would be hypertrophy and not dilatation. Though his heart is increased in size, his circulatory system is little, if any, changed. The pulse of this man seems to me to point to some febrile movement, and I should be inclined to think the real cause of his illness is one of those irregular fevers that belong to New York and its vicinity, and which sometimes continue for a considerable length of time. I would imagine the best thing for this man to do would be to go into some hospital where he would be put to bed and taken care of. The medicine which we usually give for such cases, if it should turn out to be one of continued fever, would be Warburg's Tincture, either in the form of the tincture or of capsules.

Grippe and its Complications.

The next patient is a man aged 39, who has evidently been suffering from an attack of the grippe, which began about a week ago, and he is not apparently free from it yet. The form which the disease has taken with him, has been of the ordinary character. He had first a fever, with frontal headache, which is quite characteristic, and an inflammation of the pharynx. He also had a feeling of depression, and was confined to his bed for some time. Although the first symptoms of the attack have passed away, he is still suffering, as many of those patients continue to do after the acute stage of the disease has passed.

The irregularity of this man's heart action is, I think, the result of the grippe. Probably, before the attack, he had a heart somewhat enlarged and perhaps not perfectly regular, but still it was a heart that gave him no trouble. He was able to work and felt tolerably well. Just before coming to this clinic I saw an old gentleman who had developed the same cardiac condition from the same cause as this man has. He was 70 years of age, and previous to the attack had enjoyed good health and had no idea there was anything the matter with his heart. He had an attack of the grippe two weeks ago, and as a result of this, his heart, which was somewhat large, has been doing its work very badly indeed, so that he was unable to lie down in bed without being propped up with pillows.

This is one of the many disagreeable features of this particular disease. It seems to evoke diseases which had been quiescent and had given the patient no trouble till its onset. These cases of grippe should, I think, be handled with a great deal of caution when the disease manifests itself with any great degree of severity. I confess that this year I think very much more seriously of

the disease than I did last year when it first made its appearance in our midst. Of course, the very worst feature of this affection is the pneumonia, which accompanies it; and, although having all the clinical characteristics of the pneumonia of last year, it is, however, of so much more fatal character that I consider it extremely desirable on the part of the patient, the moment he feels an attack of the grippe to go at once to bed and stay there till the fever has entirely disappeared; and even after that to wait a few days before he undertakes to do any kind of work. In this way he is less apt to have a complicating pneumonia than if he were to be up and about.

The type of the pneumonia that accompanies the grippe this year is characterized by an excess of bronchitis and an inability of the right heart to force the blood through the lungs. As a result of this condition of affairs the patient very soon develops a sibilant and sonorous breathing over both lungs, then coarse and subcrepitant râles, and he does not cough up very much mucus. As a result of this, the bronchi soon become filled with mucus, and the inability of the right heart to force the blood through the lungs shows itself in a general venous congestion which becomes more and more marked, and the patient's breathing, as a result of these conditions, becomes worse and worse, and so he goes on till he finally dies. A great many patients die in this way the first twenty-four hours after the attack of the pneumonia, while others last three days or more before they succumb to the disease.

Such cases of pneumonia are made even still more unsatisfactory for the reason that the ordinary means of treating this condition are of such little avail. Generally speaking, a general bronchitis can be relieved a good deal by efficient cupping, but this procedure is of no use whatever in the bronchitis of these patients. In ordinary cases of pneumonia cardiac stimulants have been found useful while in these cases their influence counts for nothing. A combination of venous congestion and feeble heart is usually beneficially affected by hypodermics of nitro-glycerine, but in many of these cases of pneumonia nitro-glycerine is of no use whatever.

So you can readily see why I look upon this complication of the grippe as such a serious matter, and why I advise you to take every precaution against it; and, as I have already said, the moment you begin to have the first characteristic symptoms of this affection, tell your patient to go to bed and wait there till he gets better, and not expose himself to the danger of going out of doors.

Chronic Hypertrophic Cirrhosis of the Liver.

The next patient I present to you came here, for the first time, last December. Six months previous to that time he complained of pains in the back, his urine was yellow in color and his stools white. He then began to notice a lump in the hepatic region and began to lose flesh and to develop some jaundice. Since that time these symptoms have become somewhat modified in character. His jaundice has diminished in intensity and the skin of the face has assumed that dusky, brown hue that you now see. The general appearance of the man is not at all very bad. The increase in size of the liver is symmetrical and involves both the right and left lobes, and these project down into the abdominal cavity to a distance of some twelve inches from the free border of the ribs. The liver appears hard and nodular, but the spleen is of normal size, so that the liver in its increase has not offered any obstacle to the circulation of the blood through that organ. The blood circulates through the liver as usual and on that account we have no dropsy, and no enlargement of the spleen. This man then has a condition of the liver known by the name of hypertrophic cirrhosis.

The jaundice in this case is evidently of an obstructive kind and due to one of three causes, viz.: A calculus situated in the common bile duct; a chronic catarrhal condition of the common bile duct, or a new growth situated in its wall. We can, however, exclude a neoplasm as the causative factor in this case, for he would, no doubt, present a much worse condition physically than he at present exhibits. The diagnosis, therefore, rests between the other two conditions, and we are not now in a position to make a positive differential diagnosis. The probability, however, is that this man has been suffering all this time from a chronic catarrhal affection of the common bile duct.

The question of treatment next comes up for consideration. This patient has been given cold water enemata and put on the use of alkalies, but with no appreciable benefit. The difficulty seems to lie in our inability to exert a real local influence on the catarrh of the bile duct. To bring about that result I would recommend washing out his stomach systematically and regularly every morning, and, at the same time, giving him better food than he has been in the

habit of taking. A change of climate would also be very beneficial in his case. There is one of the mineral waters which if taken in its native soil, viz.: Ems, in Germany, would prove of great benefit. If this patient were able to go there and take a systematic course of the waters of Ems, I have not the least doubt but that he would be very greatly benefited.

COMMUNICATIONS.

THE THERAPEUTIC USES OF KAVA-KAVA.

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Though not commonly employed at present by the profession, Kava-Kava has a domestic history suggestive of highly valuable clinical properties. This entitles the drug to serious consideration, and it seems that the results obtained by various observers in the treatment of a certain class of cases, warrant its further and continuous use in practical medicine.

In a previous experimental study,[1] I have discussed the general physiological action of this drug, and found that it powerfully affected the circulation, exercising at the same time a stimulating influence on the respiration and nervous system. The most important properties of the plant, from a practical point of view, were, perhaps, those exercised on the mucus membrane, the liver and the nervous system, the remedy being especially a general and local anæsthetic and a depressant of the spinal motor apparatus. These actions have been noticed also by previous observers.

In the present paper I will treat of the therapeutic uses of the drug, with special reference to the literature of the subject which, in itself, is interesting and instructive. I will in the first place detail the following cases in which gratifying results have been achieved. With a view to determine whether the effects produced would be attributed solely to the influence of the drug, no other treatment was applied in some of the cases observed.

Case I. Gonorrhœa, S. G., age 19, dental student, of bilious temperament, with good family and previous individual history. Contracted the disease four months ago. Was under treatment since the appearance of the first symptoms. Had taken copaiba and cubebs internally and for injections had used solutions of acetate of lead, sulphate of zinc and nitrate of silver. Very little relief was obtained; the painful micturition continued and the discharge, although not abundant, was yet a source of much annoyance and anxiety. Under my charge all other general and local treatment was put aside and the patient subjected to the use, internally, of the fluid extract of the Kava-Kava, fifteen drops three times a day. Amelioration was noticed in three days. In two weeks the patient was entirely well. The medicine was then suspended and no return of the disease occurred.

Case II. Gonorrhœa, J. L. F., 24 years of age, of nervous temperament, salesman by occupation, was suffering from a third attack of specific urethritis of a few days' standing. He said that the two previous attacks lasted for two and three months respectively, the disease having finally disappeared under general and local treatment and a rigorous diet. He complained of injections having been extremely painful. When the patient was first seen by me the discharge was abundant, and there was great pain in micturition. No stricture was detected, but there was undoubtedly a beginning inflammation of the bladder. He was immediately placed under Kava-Kava to the exclusion of all other remedies. Dose, twenty drops three times a day. Relief was experienced by the fourth day, with great lessening of the discharge and the burning pain on passing water. Improvement continued and at the end of the third week the patient considered himself entirely cured. There was no return of the malady for over two months after the suspension of the drug.

Case III. Chronic Gonorrhœa with Cystitis. M. A. C., medical student, age twenty-two, of a nervo-sanguine temperament, had for nearly two years suffered from an old case of specific urethritis complicated with cystitis, as a result of a third attack of the malady. The disease had never yielded to the usual remedies. A careful examination revealed no stricture, but the doubtless coexistence of prostatitis and a considerable cystitis. The discharge was scanty and muco-purulent, and although not always present there was, at times, great pain in micturition. The patient was advised to take Kava-Kava and to discontinue all other treatment. He began to take the drug immediately, and in comparatively large quantities—thirty to forty drops three times a day. In about two weeks great im-

[1] *The Therapeutic Gazette*, January 15, 1891.

provement was noticed. All burning sensations had entirely gone, although the discharge continued. This, however, diminished gradually, but did not entirely disappear after two months' treatment. It was noticed that the drug considerably increased the amount of urine. The remedy was afterwards combined with sweet spirits of nitre, and although there was no stricture, the passing into the urethra, twice daily, of a sound smeared with belladonna ointment, was recommended. In about four months the patient, though not entirely well, reported satisfactory progress. At present (eight months afterwards) he continues to take the remedy, with fair chances of complete recovery. The cystitis had disappeared and there was a notable reduction in the size of the prostate gland. It may be stated that this patient was somewhat careless about diet and regular habits, and this circumstance, I think, has delayed a final and more rapid cure. The drug has not been taken with regularity.

The following two cases were kindly communicated to me by a practitioner to whom I suggested the use of the remedy:

Case IV. A colored boy, eight years of age, had been troubled with painful and frequent micturition for over six months. Had been examined carefully for calculous deposits, but no stone was found in the bladder, nor were there noticed any traces of gravel. The urine was scanty in amount, presented a high specific gravity, 1030, and of a decidedly alkaline reaction, but no albumen or sugar was found in it. The microscope revealed triple phosphates and a considerable quantity of pus corpuscles. By exclusion the case was diagnosed as one of chronic cystitis, and accordingly subjected to the usual treatments. Benzoic acid, benzoate of sodium and eucalyptol were employed, but with negative results. No relief being obtained by these and other measures, the patient was put under the exclusive use of Kava-Kava, in ten drop doses, twice a day, with wonderful results in the course of two weeks. A cure was effected in one month. One of the actions of the drug in this case was the notable increase of the quantity of urine.

Case V. Vaginitis. A shop girl, twenty-two years of age, of a sanguine temperament, single, but who had evidently fallen from grace, presented all the symptoms of a typical vaginitis as a probable sequence of a previous attack of gonorrhœa. History imperfect but sufficiently clear. Said that she had been under treatment by regular physicians for a long time but had obtained no apparent relief. Had taken medicine and used various injections, but all to no avail. She was placed exclusively under the use of Kava-Kava in doses of twenty drops, three times a day. A change for the better was noticed in about three weeks, and the abundant and fetid discharge had lessened to about one-half its original amount. The treatment was continued, and in three months the patient pronounced herself perfectly well. The medicine was then suspended, and she was requested to report if the disease should return. The case was not heard of afterwards, and it is presumed that the trouble did not reappear.

Other cases may be cited, but the short number reported here, is sufficient, I think, to corroborate the results obtained by other practitioners, and to show that the drug possesses valuable therapeutic properties. Kava-Kava is unquestionably of great service, especially in the treatment of the various inflammations of the mucus membranes, its action in these instances being chiefly a local one. There is no doubt that the drug is also a general stimulant and tonic.

No deleterious after-effects have been observed under the therapeutic action of the drug, although in some cases it has been asserted to produce a slight constipation. It further stated[1] that when taken in excess as an intoxicating beverage it produces a peculiar skin eruption, known in Tahiti as *areverea;* and that, curiously enough, it has been used with success in erysipelatous eruptions.

In the cases above described, the preparation used was the fluid extract in doses of from ten to thirty drops, in water, three times a day. The drug has no disagreeable taste. Although other forms have been used by various observers, the fluid extract is the most reliable preparation. The remedy may be given by itself, or in combination with other drugs, such as sweet spirits of nitre, glycerine, iodide of potassium, etc., according to the indications of individual cases.

Kava-Kava is not a new therapeutic agent. Its value in the treatment of disease has long been recognized by reliable practitioners.

It was first recommended in gonorrhœa as far back as 1857[2] and we are told that in Nukahibi the natives use Kava-Kava, in small doses and at bed time, in the treatment of bronchitis and phthisis; and even

[1] *Pharmaceutial Journal, IX*, p. 218.

[2] *Annal. de Therapeutic*, 1857, p. 61.

in gout, it has been recommended internally and as a local application[1].

An interesting physiological and therapeutical study of the drug was made several years ago by Dupuy[2] who found that the plant was a sialagogue and that it acted upon the stomach as a bitter tonic, improving the appetite without producing diarrhœa or constipation, and acting perhaps as a prophylactic to catarrhal affections of the upper part of the digestive canal; that it was a gentle excitant of the central nervous system, a powerful diuretic and an excellent blennostatic. The same author found the resin of Kava-Kava to be exceedingly valuable in the treatment of acute urethritis and vaginitis, relieving pain and diminishing the secretion.

Leighton Kesteren[3] asserts that the most marked and valuable property of Kava is its action upon the genito-urinary tract. He found that the drug readily cured chronic gonorrhœal gleet, and that in chronic cystitis it possessed an influence superior to any other remedy he had ever used.

It has been prescribed with flattering success, by Edward Miller[4] in suppurative urethral inflammation. Four cases of cystitis have been cured by the same author.

The best results in the treatment of acute and chronic gonorrhœa have been obtained by C. C. Switzer[5] and J. P. Siddall.[6] The latter writer affirms to have cured also several cases of leucorrhœa, where other remedies had entirely failed.

A case of secondary gonorrhœal inflammation and four cases of acute and chronic cystitis were cured by Kava-Kava after other remedies had failed, according to the report of R. A. French.[7] The same results were observed by J. P. Baird[8] in a case of rebellious urethritis, and in one of prostatitis, accompanied with painful urination.

In cases of painful micturition, from whatever cause, no remedy has given better results in the hands of W. J. Holman.[9]

The most excellent results have also been produced by the drug, in the treatment of acute and chronic gonorrhœa, according to the reports of Boardman Reed,[1] W. Semple,[2] J. M. Blackberry,[3] and of the Charity Hospital of New York City.[4]

Another observer states that the plant produces a primary stimulating effect, increasing the secretion of the mucus membranes, afterwards acting as a tonic, improving the appetite and giving tone to the digestive organs, and in this respect, acting differently from copaiba and cubebs. This has been the experience of Alfred Fliesburg,[5] who has successfully treated with the drug, cases of cystitis and urethritis. He further asserts to have obtained excellent results in over a hundred cases of acute, sub-acute and chronic bronchitis.

Six cases of stubborn nocturnal incontinence of urine, where even belladonna failed to produce any relief, were cured with Kava-Kava, by C. N. Palmer.[6] In dropsy it has been employed with success by Herbert C. Rogers.[7] According to Weinstein[8] the good effects of the drug in cases of emphysema and tuberculosis were manifested against the dyspnœa. The same author found it valuable in acute polyarthritis, gonorrhœa, and catarrh of the bladder, where the remedy seemed to act as an analgesic. In small doses it was employed with success in acute and chronic catarrh of the stomach, in dyspepsia and cardialgia.

In carefully looking over the records of cases published, I have been able to collect a considerable number of well authenticated instances, where not only improvement, but a permanent benefit has been produced. I subjoin the following tables in the hope that they may be of some use to those interested in the subject. In these tables, among other features treated, statements are briefly made especially in regard to the affections for which Kava-Kava has been employed, together with the results obtained.

I do not pretend to have exhausted the literature of the subject, but I have not, so far, been able to find any other reports than those referred to in this article.

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[1] *Medical Times and Gazette*, December, 1854.

[2] *La Tribune Medicale*, April 1879; also *Deut. Med. Wochenschr.*, No. 1, 1881.

[3] *The Practitioner*, quoted by *The Therapeutic Gazette*, May, 1882.

[4] *The Lancet*, quoted by *The Therapeutic Gazette*, April, 1880.

[5] *New Preparations*, April, 1879.

[6] *New Preparations*, August, 1879.

[7] *New Preparations*, July, 1879.

[8] *Therapeutic Gazette*, May, 1880.

[9] *Medical and Surgical Reporter*, Sept. 25, 1880.

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[1] *The Therapeutic Gazette*, February, 1882.

[2] *The Therapeutic Gazette*, December, 1881.

[3] *The Therapeutic Gazette*, May, 1881.

[4] *The Therapeutic Gazette*, June, 1881.

[5] *The Therapeutic Gazette*, April, 1883.

[6] *The Therapeutic Gazette*, August, 1883.

[7] *The Medical News*, October, 1886.

[8] *Deuts. Medizinal-Zeitung*, December, 1887.

TABLES OF CASES TREATED BY KAVA-KAVA WITH THE RESULTS OBTAINED.

No.	Age.	Sex.	Dosage and Preparation Used.	Disease.	Duration of Treatment.	Result.	By Whom and Where Reported.	Remarks.
1	(?)	(?)	(?)	Cystitis.	(?)	Recovery.	Miller, Edward.—*Therapeutic Gazette*, April, 1880.	
2	(?)	(?)	(?)	Cystitis.	(?)	Recovery.	Miller, Edward.—*Ibid.*	
3	(?)	(?)	(?)	Cystitis.	(?)	Recovery.	Miller, Edward.—*Ibid.*	
4	(?)	(?)	(?)	Cystitis.	(?)	Recovery.	Miller, Edward.—*Ibid.*	
5	(?)	(?)	Fluid extract, dosage not stated.	Cystitis.	(?)	Recovery.	French, R. A.—*New Preparations*, July, 1879.	
6	(?)	(?)	Fluid extract, dosage not stated.	Cystitis.	(?)	Recovery.	French, R. A.—*Ibid.*	
7	(?)	(?)	Fluid extract, dosage not stated.	Cystitis.	(?)	Recovery.	French, R. A.—*Ibid.*	
8	(?)	(?)	Fluid extract, 15 drops, 3 times a day.	Chronic Cystitis.	(?)	Recovery.	French, R. A.—*Ibid.*	
9	(?)	M.	Fluid extract, teaspoonful 3 times a day.	Gonorrhœa.	(?)	Recovery.	Baird, J. P.—*Therapeutic Gazette*, May, 1880.	
10	(?)	M.	Fluid extract, teaspoonful 3 times a day.	Prostatorrhœa.	(?)	Recovery.	Baird, J. P.—*Ibid.*	
11	6 yrs.	M.	Fluid extract, 8 drops every 3 hours.	Cystitis.	4 days.	Recovery.	Holman, W. J.—*Medical and Surgical Reporter*, Sept. 25, 1880.	
12	50 yrs.	M.	Fluid extract, 25 drops 4 times a day.	Cystitis.	(?)	Recovery.	Holman, W. J.—*Ibid.*	Patient had chills and fever. Paroxysms of pain continued between chills.
13	23 yrs.	F.	Fluid extract, 15 drops 3 times a day.	Chronic Cystitis.	(?)	Recovery.	Holman, W. J.—*Ibid.*	
14	78 yrs.	M.	Fluid extract, 25 drops every 2 hours.	Retention of urine.	12 hours.	Recovery.	Holman, W. J.—*Ibid.*	
15	21 yrs.	M.	Fluid extract, 20 drops 3 times a day.	Gonorrhœa.	6 days.	Recovery.	Holman, W. J.—*Ibid.*	

No.	Age.	Sex.	Dosage and Preparation Used.	Disease.	Duration of Treatment.	Result.	By Whom and Where Reported.	Remarks.
16	(?)	M.	Fluid extract, 15 drops, 3 times a day.	Gonorrhœa.	3 days.	Recovery.	Reed, Boardman.—*Therapeutic Gazette*, Feb'y. 1882.	
17	(?)	M.	Fluid extract, 15 drops, 3 times a day.	Gonorrhœa.	8 days.	Recovery.	Reed, Boardman.—*Ibid.*	
18	27 yrs.	M.	Fluid extract, combined with sweet spirits nitre.	Gleet.	(?)	Recovery.	Blackberry, J. M.—*Therapeutic Gazette*, May, 1881.	
19	23 yrs.	M.	Fluid extract combined with fluid extract of Berberis.	Gleet.	6 weeks.	Recovery.	Blackberry, J. M.—*Ibid.*	
20	(?)	(?)	Fluid extract, dosage not stated.	Gonorrhœa.	(?)	Relieved.	Charity Hospital, N. Y. City. *Therapeutic Gazette*, June, 1881.	
21	(?)	(?)	Fluid extract, dosage not stated.	Gonorrhœa.	(?)	Relieved.	Charity Hospital, N. Y. City. —*Ibid.*	
22	(?)	(?)	Fluid extract, dosage not stated.	Gonorrhœa.	(?)	Relieved.	Charity Hospital, N. Y. City. —*Ibid.*	
23	(?)	(?)	Fluid Extract, dosage not stated.	Gonorrhœa.	(?)	Relieved.	Charity Hospital, N. Y.City. —*Ibid.*	
24	24 yrs.	M.	Fluid extract, combined with fluid extract, Yerba Santa.	Gleet.	(?)	Recovery.	Fliesburg, Alfred. — *Therapeutic Gazette*, April, 1883.	
25	35 yrs.	F.	Fluid extract, combined with buchu & eucalyptus.	Urethritis with cystitis.	(?)	Recovery.	Fliesburg, Alfred.—*Ibid.*	
26	50 yrs.	M.	Fluid extract, combined with buchu & eucalyptus.	Cystitis with prostatitis.	(?)	Relieved.	Fliesburg, Albert.—*Ibid.*	
27	(?)	(?)	Fluid extract, dosage not stated.	Incontinence of urine.	(?)	Recovery.	Palmer, C. N.—*Therapeutic Gazette*, Aug., 1883.	
28	(?)	(?)	Fluid extract, dosage not stated.	Incontinence of urine.	(?)	Recovery.	Palmer, C. N.—*Ibid.*	
29	(?)	(?)	Fluid extract, dosage not stated.	Incontinence of urine.	(?)	Recovery.	Palmer, C. N.—*Ibid.*	

No.	Age.	Sex.	Dosage and Preparation Used.	Disease.	Duration of Treatment.	Result.	By whom and Where Reported.	Remarks.
30	(?)	(?)	Fluid extract, dosage not stated.	Incontinence of urine.	(?)	Recovery.	Palmer, C. N.—*Ibid.*	
31	(?)	(?)	Fluid extract, dosage not stated.	Incontinence of urine.	(?)	Recovery.	Palmer, C. N.—*Ibid.*	
32	(?)	(?)	Fluid extract, dosage not stated.	Incontinence of urine.	(?)	Recovery.	Palmer, C. N.—*Ibid.*	
33	27 yrs.	M.	Fluid extract, 30 minims every 3 hours.	Dropsy.	3 months.	Recovery.	Rogers, Herbert C.—*Med. News*, Oct. 16, 1886.	
34	35 yrs.	F.	Fluid extract, 40 minims every 4 hours.	Dropsy.	2 months.	Relieved.	Rogers, Herbert C.—*Ibid.*	Patient had suffered from scarlet fever, when 17 years of age.
35	31 yrs.	M.	Fluid extract, combined, with convallaria, 5 minims 3 times a day.	Dropsy.	2 months.	Relieved.	Rogers, Herbert C.—*Ibid.*	Disease evidently due to cardiac disorder.
36	16 yrs.	F.	Fluid extract, 40 drops every 3 hours, with tincture of the chloride of iron.	Dropsy.	A few weeks.	Recovery.	Rogers, Herbert C.—*Ibid.*	Patient had had scarlet fever 3 or 4 weeks previously.
37	19 yrs.	M	Fluid extract, 15 drops 3 times a day.	Gonorrhœa.	2 weeks.	Recovery.	Author.	
38	24 yrs.	M.	Fluid extract, 20 drops 3 times a day.	Gonorrhœa.	3 weeks.	Recovery.	Author.	
39	22 yrs.	M.	Fluid extract 30 to 40 drops 3 times a day, in combination with sweet spirits of nitre.	Gleet with cystitis.	8 months.	Relieved.	Author.	Patient of irregular, or perhaps better careless habits. Medicine had not been been taken with regularity.
40	8 yrs.	M.	Fluid extract, 10 drops, 3 times a day.	Chronic cystitis.	1 month.	Recovery.	Author.	
41	22 yrs.	F.	Fluid extract, 20 drops, 3 three times a day.	Vaginitis.	3 months.	Recovery.	Author.	

To recapitulate, of the authenticated cases treated with Kava-Kava, as reported in this paper, there were:

Relieved—Gonorrhœa, 4; Cystitis, 1; Dropsy, 2; Gleet, 1; in all 8 cases.

Cured—Acute Cystitis, 9; Chronic Cystitis, 2; Gonorrhœa, 6; Prostatorrhœa, 1; Retention of Urine, 1; Gleet, 4; Urethritis, with Cystitis, 1; Incontinence, of urine, 6; Dropsy, 2; Vaginitis, 1; in all 33 cases.

Total forty-one cases.

It is thus seen that Kava-Kava, from these statistics, is a therapeutic agent of no inferior value, and worthy of further consideration. Certainly it does not deserve the neglect in which the remedy is at present held by the medical profession.

THE EXPECTANT TREATMENT IN CASES OF SUSPECTED SYPHYLITIC INFECTION.

BY HENRY BEATES, Jr., M.D.,

PHILADELPHIA.

Bassereau, father of the Dualist School, wrote:

(1.) "If a person who has been affected with chancres, followed by constitutional symptoms, is confronted with the person who gave the infection, or with those to whom it has been communicated, it will be found that all such, without exception, have been affected with chancres followed by constitutional manifestations. The chancre is never purely local.

(2). "On the other hand, if one who is affected with a chancre which has not been followed by any syphilitic symptom, be confronted by the person who has caused the infection, the former will be found to be the bearer of a chancre which is entirely local and which does not infect the constitution. This admits of no exceptions.

"Thus no chancre which is followed by constitutional symptoms gives rise to a purely local sore, nor does a local chancre by infection communicate an ulcer which is capable of producing syphilis."

These cardinal truths, when first proclaimed, enabled clinical distinctions to be made between the non-syphilitic lesion and true chancre, and upon the ability to recognize these respective lesions will treatment be largely determined.

When the clinical characteristics of initial lesions are typically pronounced, prognosis and treatment are self-evident, but, unfortunately, like typhoid fever, and, indeed, all diseases, the departures are often so great that it is frequently absolutely impossible to diagnosticate the lesion, and here it is that we hesitate how to act. To illustrate: A patient two or three days after a suspicious confrontation suffers from a multiple ulcerative lesion. The time of development, character of abrasion, and clinical history, incline to the belief that we have before us a chancroid. The sores are cauterized the patient is told that he is free from syphilis and is dismissed with the belief that he is suffering from a simple ulceration, which, in ten days will have healed and not be followed by constitutional trouble. In six weeks this individual probably returns because of a cold and an eruption which are recognized as the secondary phenomena of syphilis. The practitioner consults works of reference and consoles his mind with reading about a mixed sore, and pacifies the unfortunate syphilitic, and fortifies himself against criticism, by showing the victim the paragraph which affords such abundant diagnostic latitude. Without further discussion of this *ignis fatuus*—the mixed chancre—it is self-evident that a true description of it is, a venereal ulcer, the character of which can not be ascertained; if followed by syphilis (and a favorable prognosis had been given), "it was mixed," if not, "it was no chancre at all," but what we believe all chancroids are: *Simple venereal ulcers.*

It may not be amiss here to describe the sores which are not followed by syphilis and those which are. I will use term simple venereal ulcer for chancroid, and chancre for the specific, hard, or Hunterian lesion.

SIMPLE VENEREAL ULCER.

1. No period of incubation.
2. Originates from similar lesion or pus from bubo.
3. Multiple and confluent.
4. Auto-inoculable.
5. Begins as a vesico-pustule.
6. The lesion is an ulcer, deep, with sharply cut perpendicular walls or undermined, purulent base and secretion, and painful.
7. The hardness is around the lesion and is simply tissue infiltrated with inflammatory lymph.
8. The lymphatic glands are frequently inflamed, painful and possess a suppurative tendency. Bubo common.
9. Tendency to progressive ulceration and invasion of structure.

CHANCRE.

1. Period of incubation 10–35 days.
2. Originates from chancre or secretion of secondary stages like mucus, saliva, or blood.
3. Single, perhaps never confluent, and rarely multiple.
4. Not auto-inoculable.
5. Is a simple erosion or a papule.
6. Lesion is saucer-shaped or hollowed out, superficial, almost clean base, very little if any secretion, and very little pus.
7. The hardness is limited to the lesion and is minute in size and suggestive of a small shot.
8. Lymphatic glands indurated, not very painful and free from active inflammatory processes.
9. Chancre is locally a lesion of little suffering and tends to spontaneously heal without treatment.

These characteristics, then, when typically present, offer no difficulty, but when exceptions rule what is to be done? Prominent schools advise absolutely opposite lines of procedure. One teaches that the immediate exhibition of antisyphilitics is a *sine qua non*, and any other plan unwarranted; the other promulgates the doctrine that to treat a patient with a doubtful lesion in any but an expectant plan is wrong. In the confused light we have of the course of syphilis this possesses much to recommend it.

What is the natural history, so to speak, of syphilis? A fact to which little attention seems to have been directed is, that in many instances, just as in any disease, cure occurs spontaneously. This is to be remembered. Again it is a prevalent belief that mercury possesses the power to modify or even prevent the appearance of secondary phenomena, and, consequently, the so-called tertiary sequela are also averted. In strong contrast with this exists the indisputable fact that very frequently while a patient with chancre is taking mercury secondary phenomena occur. It is true sometimes a little late. A sect of syphilographers teaches that mercury aggravates the after developments and imperatively demands the utter abandonment of the drug. Another sect holds a contrary opinion. How is this prominent face-to-face contradiction of therapeutics explained? If the method of treatment be examined the answer is contained in this statement of Zeissl: "It is true if an individual suffering from an early syphilitic eruption is subjected at once to mercurial treatment, the symptoms existing at the time usually disappear very rapidly, but the syphilitic diathesis remains, and is manifested particularly by hyperplastic lymphatic glands." It will be noticed, however, that among one hundred individuals treated in this way 96 on the average will be attacked by relapses sooner or later. In those individuals who have received mercurials internally or hypodermically at the first appearance of a syphilitic eruption, the relapses occur as often as after early inunctions. Opaline patches on the mucous membrane of the tongue, mouth and pharynx, occur with special frequency after the internal or hypodermic administration of corrosive sublimate.

If we make a résumé of these facts, it appears that mercury when given in the earliest phases of syphilis, causes a very rapid disappearance of the morbid symptoms, but that relapses occur more frequently than after other methods. I would also call attention to this: "The favorable results which may be attributed to mercury, are, that it usually causes more rapid disappearance of the symptoms of syphilis than other specifics, and that, when it is used two or three months after infection, and the disease has had time to exhaust itself somewhat, very small doses suffice to cause the disappearance of the symptoms." As a matter of course, it cannot be foretold whether such recovery is permanent. But we must ask, in the light of the knowledge we possess of the natural course of syphilis, whether two or three months' exhibition of mercury is the kind of therapeutics upon which it is proper to base or formulate a principle? It seems that no argument is demanded. So much for the anti-mercurialists.

A few words in conclusion regarding the diagnosis of the initial lesion. It is evident that we have to deal with two, and only two, lesions in our diagnosis. When the above characteristics of chancre are typically developed there is no difficulty, and we cannot be in doubt as to the proper treatment. I believe in the cauterization of chancre for self-evident reasons. It satisfies the patient and reduces the chances of further infection and enables a line of treatment to be described. As mercury in my opinion is, as a rule, the specific to be employed, and as this remedy does not invariably prevent the manifestations of secondary phenomena, and as in many instances the diagnosis of the initial lesion is obscure, it is a rule with me to not administer the drug until constitutional manifestations occur. By this plan the condition of the patient is not permitted

to be worse than it would be, if mercury be given immediately. I refer here to cases where the diagnosis is certain, for where there is doubt there should never be instituted specific treatment. Again, where diagnosis is certain, the clinical fact that secondary phenomena are an index of the future course of the disease, and that mercury modifies, while it does not prevent these, it is just as imperative to know the type with which we are to deal as it is to know the type of pneumonia or typhoid fever. This is the more important as the treatment is entirely too routine; so much so that it can be said with a great degree of truth that the treatment of syphilis is the exhibition of a standard mixture of iodide of potassium and bichloride of mercury or one-fourth to one-half grain doses of iodide of mercury, no matter what the mildness or severity of phenomena may be, or structures involved. It is just as reasonable to institute the most active measures in vogue for any disease because an initial sign or symptom was present as to blindly exhibit mercury in case of chancre. Who would introduce a Dwyer tube or perform a tracheotomy upon the earliest manifestation of a diphtheria? Is the one more inconsistent than the other?

What are some of the advantages gained by waiting until secondaries occur? First, we have some chancres not followed by constitutional phenomena at all; just as some people experience a sore throat in a scarlatinous room yet enjoy immunity from constitutional involvement. Second, a rash occurring within seven weeks indicates severity and places the physician on guard. Third, the rash occurring on time, its profuseness and type indicate a greater or lesser dyscrasia or tertiary future, and in my experience demonstrates the necessity of early instituting those remedies which we usually employ in the tertiary stage. Fourth, a late appearing rash is indicative of a mild after-course, this, like the preceding, being greater or less according to profuseness and type.

LETTERS FROM SPECIAL CORRESPONDENTS.

Paris Letter.

SURGICAL INTERVENTION IN DISEASES OF THE NERVE-CENTERS.

Paris, April 10th, 1891.

The Fifth French Congress of Surgery has just completed its work. It was held in Paris between March 30 and April 4, a great many eminent surgeons from every country being present.

The first question which had been given out last year as a subject for discussion was on "Surgical Intervention in Diseases of the Nerve-Centers."

Prof. V. Horsley, from London, who is well known to the medical profession for his works in that line, was to open the discussion, but, at the last moment, he was kept away and had his paper read by his assistant, Dr. Boyce. The principle part of the paper referred to the surgical method used, which consisted of opening the cranium by means of a very large trephine; the cutaneous flap is very large; and, the opening in the bone is also made large. The way in which the cranial section is made is as follows: A trephine is applied until it reaches to about the middle of the depth of the portion of bone to be removed; and from the center of this portion a smaller disk of bone is removed, the remaining bone up to the limit indicated by the first cut is removed with bone forceps.

When the convulsions are limited to a certain portion of the body, it is comparatively easy to localize the seat of the trouble and the part where we are to interfere. If, however, this is not ascertained accurately, when the brain is exposed in the suspected region, the exact part may be found by the application of an electric current.

As regards the medical treatment of cortical tumors, Dr. Horsley says that one ought never to use specific treatment longer than six weeks; if, after such a time, the case does not improve, it is a clear case for operation; for even after a simple exploratory trephining, the cessation of the cerebral compression may be enough to effect a cure, as has been observed in several cases.

Prof. Lannelongue, of Paris, read a paper on the "Treatment of Microcephalous by Craniectomy," he gave the result of 25 operations performed by himself. He called attention, first, to the fact, that in microcephalous patients, one finds an advanced state of the union of the sutures and narrowness of the fontanelles. In microcephalic patients ossification of the fontanelles is anticipated. The affections which can be benefited by craniectomy, according to Dr. Lannelongue, are numerous. Obstetrical compression, in hæmatoma, circumscribed pachymeninigitis, serous cysts, etc., in hydrocephalous hyperostosis of hereditary syphilitic origin—again, in diseases of the brain-sub-

stance itself, in cerebral atrophy of vascular origin, in diffuse sclerosis, etc.

Two kinds of operations are recommended by the author: 1st, linear craniectomy; 2d, flap craniectomy.

The first one is made along the superior longitudinal sinus and can be extended through the coronal suture, on the motor or Rolandic zone, towards Broca's center; he has also practiced it on the occipital behind, between the lateral sinus and the occipito-parietal suture; again, he has performed a transversal and symmetrical craniectomy on the frontal bone by detaching the longitudinal sinus.

By flap craniectomy, he means that operation which consists in making sections of the cranium combined so as to allow the flaps to remain adherent by a more or less extensive bony base. Sometimes the flap involves only one bone—the frontal, or the parietal; more often it extends over two bones—the frontal and parietal. The gap between the cut surfaces varies from 8 to 12 millimeters. The operation is performed by attacking the bone with a trephine, at one of the extremities of the wound, and then doing the rest with cutting forceps. The dura mater can be left untouched; if, however, there exists any trace of pachymeningitis, it would be well to puncture it or even to open it freely; if, however, an incision has been made in the dura mater, this membrane must be sutured, which is not necessary if only punctures have been made. As to the periosteum, it can be excised or not; both have been done, with no advantage one over the other. As to the final results—out of 25 craniectomies, he has had one death in 48 hours from acute septicæmia and continuous flowing of the cerebro-spinal fluid. The youngest child operated on was 8 months old, and the oldest 12½ years—as to the after-results, they were all benefited by the operation.

Dr. Anger, of Paris, also reported a case of craniectomy which was performed on a child 8 years old, who was taken, when 15 months old, with severe convulsions, occurring in the evening, and her intelligence seemed to cease developing. In fact she was at the time of the operation, so far as intelligence was concerned as little advanced as any 15 months child and did not even know her alphabet; she repeated words without understanding them; she said papa and mamma; she had no idea of danger and had several times fallen out of a window. The operation was made as follows: A linear incision was carried from the frontal eminence to the lambdoid suture; a first disk of bone was removed, and the cranial excision was then continued for 12 centimeters (4 inches); the dura mater being prominent, a puncture was made with a hypodermic needle. The osseous wound was then enlarged, and when finished had an oval form of 11½ centimeters long (4 inches) antero-posteriorly, and 4 centimeters (1⅓ inch) transversely. The skin was finally united.

The day following the operation, the patient ceased to urinate or defecate in bed; she asked to eat; she began to cry when any one spoke of her absent parents; the athetose movements which existed ceased; and, finally, she has been improving steadily, both physically and intellectually up to date.

Dr. Girard presented an interesting case of Essential or Idiopathic Epilepsy, cured by trephining. The patient, aged 29, had been suffering from epileptic fits, five or six a day, ever since the age of 14. At 29, in a fit of anger, she shot herself in the right temple, and fell in a state of coma; the left arm was completely paralyzed. She was trephined, several pieces of bone and the bullet were removed and the skin again closed. It is now five months since the operation, and the patient has not had a single fit. She had before her operation six children, five of them having died from convulsions.

Dr. Duret, from Lille, also presented two cases of trephining. One was for aphasia of traumatic origin, the patient having fallen on his head. On trephining, a large clot was found in the Rolandic region, and removed; the patient was soon able to speak again, but unfortunately on the 23d day after the operation, after a rather copious alcoholic dissipation, he was attacked by severe cerebral congestion, with convulsions of the four extremities, from which he never recovered.

The second case was that of a young soldier of 22, who had had a fall at 14, and was subject to epilepsy. Trephining exposed a diseased arachnoid membrane in the parietal region. The epileptiform attacks, the headache, and vertigo ceased after this operation.

Dr. Jeannel, from Toulouse, reported a case of trephining for Jacksonian epilepsy. The patient had suddenly been seized a year ago, by an attack of apoplexy which left behind it a palsy of the right upper extremity. Two months later he had another attack, followed by spasmodic move-

ments of the right upper extremity; sometimes these would extend to the face and to the lower extremity, but still there was a continuous spasmodic agitation of the right forearm. There was also more or less complete aphasia. On the left side of the cranium no depression could be found. A small cicatrix existed, however, which was the result of a punctured wound made at the age of 15, but the cicatrix was not adherent. The cranium was opened in the Rolandic region on that side. When opened Dr. Jeannel found a violet, flabby mass which was firmly united with the cerebral substance, and extended downwards and backwards, so that the bony opening had to be enlarged. This diseased mass was curetted out and a hole, the size of a green almond, was left in the cerebral substance. The periosteum and skin were then united.

The day following the operation, all spasmotic movements had disappeared, but were replaced by a paralysis of the right forearm; the speech returned very slowly; no more epileptic fits occurred.

Dr. Regnier, of Paris, presented also a case of trephining for Jacksonian epilepsy. The case is an interesting one, as Prof. Charcot had given the following diagnosis: Partial sensitive-motor epilepsy, corresponding to a probable lesion at the middle and inferior regions of the Rolandic convolutions.

At the age of 5, the patient had been taken with a sensation of pricking on all the mucus membranes of her head and an abundant lachrymal secretion. In 1888, she fell several times on her head, and one finds to-day a cicatrix in the left parietal region. In April, 1889, she had her first attack; her mouth was strongly twisted to the right four or five times a day. Convulsions extended to the head more than to the arms and lower extremities.

The operation of trephining was resorted to. A disk was removed from over the Rolandic region and the opening enlarged, when the surgeon found a gray-colored tumor, of cystic appearance, extending down into the cerebral substance. This extended further forward than the margin of the bony section, so that after having scraped out as much as possible of its superficial portion, the wound was closed. The fits, however, returned again, so that a new operation had to be performed 4 months later. It was then found that the tumor had already re-formed itself, and it was again enucleated with the curette; the tumor was a glioma with a central cystic cavity, and it was situated at the inferior extremity of the ascending frontal convolution and the lower end of the third frontal convolution.

Dr. Michaux, of Paris, presented a case of trephining for non-traumatic meningeal hemorrhage. The patient was an habitual absinthe drinker and had been so for years. He was brought to the hospital in a complete state of apoplexy, with left facial palsy and paralysis of the right upper extremity. The following days the paralysis extended to the right inferior extremity; epileptiform convulsions occurred, etc. In addition, the patient did not present the least sign of external traumatism.

The patient was trephined over the Rolandic region on the left side; three disks of bone were removed, making an opening of 2 inches long. The dura mater was next incised and this allowed several large black clots to escape—the quantity of two table-spoonfuls. The symptoms gradually disappeared, excepting those connected with speech, which has remained slightly defective even five months after the operation.

This was a clear case of spontaneous hemorrhage of alcoholic or uræmic origin cured by trephining.

Dr. Picqué, of Paris, reported another case of trephining. It was in a young lady, aged 19, who shot herself with a revolver. She was in a comatose state for five days and then gradually and completely recovered her mental faculties. The attending physician said there was no penetration, yet there was a wound at a point between the right frontal region and the corresponding temporal, a little in front of the coronal suture. The patient complaining of persistent headache on the right side, the diagnosis of cerebral abscess was made, hence trephining was resorted to. The cerebral surface appeared intact, except at one part, where the gray substance protruded. An incision brought out a great deal of pus, but the bullet could not be found. To-day the patient has completely recovered and is doing very well.

Dr. Broca, from Paris, presented three cases. On one of his patients, there was an indication of localization: an athetose movement of the upper extremity; yet in that case the author concluded at once that the cortical center of the upper extremity ought to be exposed, for according to the history of the disease and the form of the head of the patient, he has diagnosticated intra-ventricular hydrocephalus, hence the first surgical indication was the removal of part of this liquid, so as to diminish the compression of the brain. He, therefore,

opened and drained the left lateral ventricle, using Keen's process of trephining one inch behind and above the external auditory meatus.

His second case was an infantile spasmodic brachial monoplegia. The athetose contractions of the left upper extremity resembled the preceding patient's condition, but the history of the disease, as well as the form of the head, pointed to infantile cerebral sclerosis. In addition, for the past four years, the patient had had fits of Jacksonian epilepsy starting from the thumb.

On trephining, a cyst was found on the motor center for the thumb, at the postero-inferior portion of the center of the upper extremity. The epileptic fits have not completely ceased.

Finally, the third case was one of compound fracture, for which the patient had already been trephined and a small abscess found; the operative result was good, but a few months later the patient returned with a Jacksonian epilepsy of the lower maxilla and left upper extremity, presenting a small cranial fistula. Thinking that a small piece of bone might be the source of irritation, this was removed, with great improvement in the patient's condition.

Prof. Verneuil, of Paris, made an interesting communication on a case of "Fistula of the Sacral Region with escape of Cerebro-spinal Fluid." The young lady had noticed sixteen months before she presented herself at Dr. Verneuil's consultation, that a small tumor appeared in the sacral region, about the size of a small orange, which tumor burst spontaneously four months later, allowing a great quantity of pus to escape. Dr. Verneuil thinking that a sequestrum was the cause of the suppuration, operated with the thermo-cautery, but when he reached the supposed diseased bone, he found that his finger came in contact with one of the posterior sacral foramina, the borders of which appearing roughened were thoroughly scraped. The day after the operation the patient was found drenched in her dressings, this liquid examined and demonstrated to be cerebro-spinal fluid. Four days after the operation and this over-flowing, the patient was found in a state of deep coma and dyspnœa, but without fever or vomiting. These comatose states had occurred before whenever the abscess opened. The patient is to-day cured. The lesion was of bony origin, producing acute abscess, the dura mater having been perforated in one of the sacral foramina, from which occurred the escape of the arachnoid fluid.

Dr. Bazy, of Paris, also made a communication on exploratory surgical interference in cases of compression of the spinal cord, or in cases of uncertain diagnosis. He reported the case of a woman on whom he operated for symptoms which were ascribed to a probable tumor of the cord; the spinal canal was opened in the ruptured region, but with negative results; the wound healed without the least trouble. A. C. H.

Society Reports.

GYNECOLOGICAL AND OBSTETRICAL SOCIETY OF BALTIMORE.

Dr. Neale reported the following case of

"Occlusion of the Os Uteri during Four Days' Parturition:"

Mrs. K. W., æt. 26 years; white. Past history unimportant. Last menstruation early part of April, 1890. Pregnancy normal up to Nov. 16th, 1890, when she slipped and fell violently on her right side on the sidewalk. There was no vaginal discharge at the time and no discomfort except from the jar, bruising, etc., and the patient was up and about all the time. No movements of the child were felt after the fall.

About Christmas, 1890, an offensive yellowish vaginal (uterine) discharge occurred and continued for one week.

On the night of January 12th, 1891, her first labor pains began, and were so severe as to require morphine being given by her attendant. There was no "show" or discharge of any kind. The pains increased and the patient was suffering severely when I saw her for the first time, Friday evening, January 16th, 1891. She was a large well-built and well-nourished woman.

I could not distinctly map out the child by abdominal palpation. By auscultation gurgling was detected over the entire uterine tumor, but not a trace of fœtal heart sounds could be heard.

By vaginal examination; the vagina was very short and small, there was no cervix and no os. A continuous layer of mucus membrane, flush with the vaginal walls, closed over the entire vault of the vagina, and a little dimple in its center was the only indication of where the os ought to be.

The patient was chloroformed, placed in position, the hand passed into vagina, the finger pressed firmly against the dimple when it suddenly yielded or burst open like a membranous web, permitting a gush of a

not foul smelling bloody water to escape, and at once the rapidly enlarging outlines of the os could be felt, then about as wide as a silver half-dollar piece. The soft bagging scalp and loose cranial bones came down upon the enlarging os and as the expulsive efforts were almost *nil*, I grasped the head with a Simpson's cranioclast which tore away, and then adjusted the blades of a Tarnier basiotribe over the head and neck and a thoroughly macerated, but not decomposed or foul, small child was easily extracted. The perineum was intact, and the os fissured slightly. A small placenta appeared within six minutes. There was considerable post-partum hemorrhage, the uterus acting feebly. The os remained open about size of silver-half dollar piece, with thick edges; the uterus was rather small but not firmly contracted. Two quarts of a hot intra-uterine 1-4000 bichloride douche were injected. The patient rallied well and debarring an occasional slight rise of pulse and temperature, and faintly fœtid lochia which readily yielded to the antiseptic douche, the puerperum was uneventful and recovery complete. This case was a novel one to me. I am quite sure the membrane I felt was mucus, and not the amniotic sac, nor do I think the case should be classed among those of cervical occlusions or stenosis from endotrachelitis.

Dr. J. Whitridge Williams read a paper on

"THE INDUCTION OF PREMATURE LABOR IN CONTRACTED PELVES."

He pointed out that the comparative neglect of the operation in this country was due to two causes; the absence of large lying-in institutions and the consequent lack of large amounts of clinical material, and the almost total neglect of pelvic measurement.

By the term induction of premature labor, one understands the artificial interruption of pregnancy at such a period that a viable child may be born; that is, at any period from the 28th or 30th week to the end of pregnancy.

Dr. W. after a discourse on the history of the operation, showed that it was first rationally employed for this indication in England, as the result of a conference of the eminent physicians of London in the year 1756. Within fifty years it was quite generally employed on the Continent, and soon enjoyed a popularity which caused it to be resorted to on the most trifling pretexts, and which in 1869 called forth Spiegelberg's forcible denunciation of the operation by which he showed that the mortality, both of the mother and children, was nearly three times greater after the operation than if the woman went on to term.

This was soon followed by articles by Litzmann and Dohrn, who showed that Spiegelberg had painted the picture in colors far too dark. Litzmann showed that in moderate degrees of contraction, 8.25-7.5 cm. (3¼-3in.) the operation was indicated in the interests of the mother, as shown by a mortality of 7.4 per cent. after the operation compared with one of 18.7 per cent. when the woman was allowed to go on to term. Dohrn stated that the proper method of appreciating what the operation accomplished, was not to compare so many cases of induced labor with so many cases of labor at term, but to compare the results of premature and spontaneous labors in the same woman; by this method he found that twice as many children were saved by inducing labor as by allowing the woman to go on to term. Consequently, they proved that the operation was indicated in properly selected cases both in the interests of the mother and child. The introduction of antiseptic methods into midwifery, almost completely robbed the operation of danger for the mother, as will be readily seen from the following statistics. Thus Haidlen reports forty-four cases from the Stuttgart clinic, with no material deaths and 72 per cent. of the children saved. In 1889 Korn stated that Leopold lost one woman in forty-five cases and saved 66 per cent. of the children, and last July Ahlfeld stated that he had induced labor one hundred and eighteen times with the loss of only one mother, and had saved 62 per cent. of the children. At the Berlin Congress, Fehling stated that in sixty cases he had saved all the mothers and 80 per cent. of the children.

From the above sketch we will readily see that the maternal mortality in properly selected cases is very slight. Four hundred and one cases collected by Korn, showing a maternal mortality of only 2.9 per cent., or just a trifle more than normal labor in a normal pelvis, while the fœtal mortality ranges from 20 to 70 per cent., the average being about 33⅓ per cent. So in this operation we have a means of saving about two-thirds of the children without any risk of the mother. On reckoning by Dohrn's method we save at least twice as many children as if we allowed the woman to go on to

term, and then resorted to some conservative operation.

These are the prospects of the operation, but unfortunately the degree of contraction within which the operation is justifiable is very limited, and one can only think of it in moderate degrees of contraction. According to Litzmann, in flattened pelves with a conjugata vera of 6.5–8.25 cm. (3–3.25 in.); and to Schroeder, 6.5—9.5 cm. (2.5–3.75 in.). As pelves with a conjugata vera above 8½ cm. (3⅜ in.) offer a reasonable chance to both child and mother at term, and those below 7 cm. (2¾ in.) offer no chance to the child, I think that the operation should be restricted to these limits; that is between 7-8½ cm. (2¾-3⅜ in.) in simple flattened pelves. In the justo-minor pelvis a conjugata of 9½ cm. (3¾ in.) or less will usually be an indication for the operation. In the rare forms of obliquely narrowed pelvis, whatever the cause, we must be guided almost entirely by the history of previous labors.

We thus have the operations restricted to a very small range, 1½ cm. (⅝ in.), which should only be exceeded when the previous history tells us that the previous labors have all ended disastrously. We should not think of inducing labor in a flattened pelvis with a conjugata below 7 cm's. (2¾ in.) for in that case the prospects for the child are almost *nil* and the dangers to the mother greatly increased. Here we come to the relative indication for Cæsarian section, when it is best to allow the woman to go on to term, and attempt to save both mother and child by that operation.

With these contracted indications, we readily see that an accurate idea as to the exact size and form of the pelvis is an absolute prerequisite for the performance of the operation; and the only means by which we can accurately obtain this information is by carefully measuring the pelvis. We should not content ourselves with simply measuring the conjugata vera, but should also take the external measurements and thereby attempt to determine with what form of pelvis we have to deal. After doing that, we must carefully examine the interior of the pelvis to determine its height; to see if it is generally contracted, and if contracted, if the contraction increases as we approach the outlet, we must look for exotoses of the pelvic bones and carefully examine the promontory to see if it is double or not. If we think the pelvis contracted laterally we should measure the distance between the tubera ischiorum on each side, as Breisky recommended. We should also attempt to estimate the transverse diameter of the pelvis, which is most difficult to do, and the most that can be expected is to examine alternately with each hand and try to stroke the linea innominata and so relatively to get some idea as to the transverse diameter.

Having decided that an operation is necessary, the next question is, when shall it be done? Of course, the younger the fœtus, the smaller will be its size, and consequently the easier its delivery. But, unfortunately, the smaller the fœtus, the less chance will it have of living even if it survive the operation. Generally speaking, we say a child is viable after the twenty-eighth week, but its chances of living are almost *nil;* indeed children 30-32 weeks old have next to no chances of living. The later the operation, the more chances has the fœtus of living after it, but unfortunately its size and consequently the difficulty of its delivery increase with its age. If possible, the operation should be done about the 34th–36th week, our object being to operate at the latest possible period consistent with safe delivery. To fulfill this object we must attempt to gain an accurate knowledge as to the size of the child's head. Unfortunately, we are unable to determine its size with mathematical precision or even with the relative precision of pelvimetry; so we are obliged to take advantage of every possible hint on the subject. Some of the following points may be of assistance in different cases. We must consider the mother's account as to the duration of the pregnancy.

Notice the size of the parents, large parents usually having large children. Inquire about the previous labors, particularly as to the size of the head. Endeavor to estimate the size of the head by abdominal and combined abdominal and vaginal palpation; and note the consistency and amount of resistance to compression that the bones of the head offer. Try to measure the head with the pelvimeter through the abdominal walls, and deduct the estimated thickness of the abdominal walls from the result. Notice the size of the large anterior fontanelle, average width 2 cm.; the width of the sutures; and the distance from the anterior to the posterior fontanelle; for as they are larger or smaller, it indicates a larger or smaller head. Measure the length of the fœtus as it lies in utero, from breech to vertex, double the measurement and it gives, according to Ahlfeld, the length of the fœtus. If a foot is prolapsed, measure it, for Gœnner stated that there is a difference of nearly one centi-

meter between the length of the foot at term and one at thirty-two–thirty-four weeks.

One of the most important methods is that of Mueller who attempts to force the head down into the pelvis by pressure from above. As long as he is able to force the head down, he knows that labor will readily take place, but when he can no longer force the head down and when it bulges out over the symphysis, then he considers that the time for operation has arrived.. As the great danger to the mother is from sepsis, one cannot be too careful in one's efforts to guard against it, and consequently one should be most particular in one's preparation for the operation. For several days previous to operating, the woman should have a warm bath daily; and several times a day be douched with warm water, 95–98 F., containing salt or borax, by which the cervix is softened and dilated. Just before operating, the genitals should be most carefully washed with hot water and soap, followed by a 1–1,000 bichloride solution; the vagina should also be most carefully cleansed.

The hands of the operator should be washed for at least ten minutes in hot water and the nail-brush vigorously used, after which they should be placed for several minutes in a 1—5,000 bichloride solution. All instruments should be sterilized by steam or placed in a 5 per cent. solution of carbolic acid for at least thirty minutes.

The most generally approved method is that of Krause or the introduction of a disinfected flexible bougie between the membranes and the uterine wall. If properly conducted it is almost entirely devoid of danger for the mother, and will bring about the birth of the child in a period varying from 8-241 hours, averaging about eighty hours or about three days. To insert the bougie, the woman is placed on her back or side as may be convenient, and the cervix brought down by a pair of bullet forceps and the cervical canal carefully cleansed with bichloride on a pledget of cotton; the bougie is then carefully inserted so that its lower end is within the vagina, care being taken not to wound the membranes or the placenta. Then the vagina is packed with iodoform gauze, which serves to hold the bougie in place. If at the end of twenty-four hours no labor pains have been produced, the bougie should be removed and another introduced at another point under the same precautions as the first. If this method fail we may resort to Kiwisch's method of allowing a current of hot water, 100–110 F., to flow through the vagina several times a day for a period of 5–15 minutes. Or we may puncture the membranes, as accessory to these, we may loosen the membranes about their lower pole; tampon the vagina with iodoform gauze or employ Barnes' bags. If the pains are weak, Fehling recommends a version by Hick's method and bring down one leg, whereby increased contraction is produced and one is afforded a ready means of ending the labor if one deems it expedient in the interests of the mother or child.

Dr. Neale: I regard the chief point in this very able paper to be the endeavor to definitely fix the limits for the induction of premature labor in contracted pelves, not as opposed to Cæsarian section, but as applicable to a distinct and separate class of cases. This endeavor I strongly advocate, but at the same time must confess that I do not believe the plan is always practicable at the bed-side. There are so many factors entering into the determination of this question as stated in my paper, that I can now only repeat what I there quoted, viz.: "A given pelvic measurement is useful as an indication of what has been the experience of others under similar circumstances, but is not a final ground for decision." After the evidence adduced, which doubtless represents the opinion of the best medical authorities, I am sure I only voice the concurrence of this society in accepting the limits for this operation as stated by Dr. Williams. This is practically in accordance with the teachings of Lusk—probably our strongest American authority—who places the range for the induction of premature labor in contracted pelves at a conjugata vera of from 2¾ inches (7 cm.) to 3½ inches (8.75 cm.).

Dr. Kelly: The subject is too large to be discussed formally. What we want to know for practical purposes is, whether the children live any time after they get home. My own experience is but few live. If they are sent out simply to die soon after at home, the induction of premature labor among the poorer classes simply becomes a species of uterine gymnastics.

A method of my own which I have found most successful in inducing premature labor, is taking a flexible whalebone bougie, introducing it between the membranes and the uterine wall, high up into the uterus, and sweeping it gently around for one or two inches in either direction. This has not failed me in any instance in bringing on labor.—*Journal of Gynecology.*

THE
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THE MEDICAL AND SURGICAL REPORTER.

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In these busy days when every moment is preyed upon and when thousands of presses are offering us the results of an ever-increasing amount of observation, it becomes a necessity that for the practitioner to keep abreast of the times the essential part of this mass of work should be so condensed and arranged that "he who runs may read." With an increase of the size of the REPORTER from 28 to 40 pages of reading matter, and with the aid of a competent corps of assistants we hope to keep our readers posted in all important progress in medical science and art. To this end our editorial columns will be devoted to Leading Articles which will consist largely of short critical résumés of the more important and recent advances. The Periscope will also be modified—it will follow the editorial columns, and the abstracts will be arranged collectively for ready reference according to the special departments in medicine to which they belong.

The REPORTER has always been pre-eminently a journal for the practicing physician, and we will spare no effort to keep it so; but while the practical will always be foremost in view we will endeavor to neglect nothing which promises to be of value to the clinician or which is of special interest to the profession.

Space does not permit us to offer in detail what we have done or intend to do, but it is hoped that these few statements will be sufficient to indicate our position, and our determination to secure the best material to be had and keep our readers thoroughly informed in a concise and practical way of medical progress.

We ask the indulgence of our readers for any shortcomings in the present number. Owing to a misunderstanding with our predecessor, our task was one of exceptional difficulty.

As we are going to press, it is announced that Dr. Joseph Leidy, the eminent naturalist and Professor of Anatomy in the University of Pennsylvania, is lying critically ill, and it is not likely that he will live twenty-four hours.

THE DANGERS OF COCAINE.

The rapid accumulation of cases in which alarming symptoms followed the local application of small quantities of cocaine, together with the fact that these untoward effects are due to individual idiosyncrasy and do not invariably occur immediately, is a positive warning to the profession that this powerful substance should not be used in any case for the first time without proper antidotes directly at hand and the patient kept under surveillance for at least a half hour. We will not attempt to refer to the cases published in which ordinary therapeutic doses administered internally or subcutaneously caused symptoms similarly embarrassing.

Nearly three years ago, Satterwhite, as a result of a study of one hundred cases of poisoning by this alkaloid, called attention to the dangers attending the use of even very small doses, and at about the same time another author after summarizing the records of fifty cases made a similar announcement. That this warning was well founded is evident by succeeding publications. A case is reported by Broughton in which unconsciousness; an irregular, slow respiration; and a slow pulse, followed the application of three minims of a twenty per cent. solution within the cavity of a tooth. Whistler, after the application of a four per cent. solution to the nasal cavity, noted vertigo and threatening syncope. In a case of glossitis, Ricket states, that the patient became moribund after the use of a similar solution. Myrtyle dropped three minims of a three per cent. solution in each eye, which immediately caused a sense of numbness in the back of the tongue and throat, palpitation, threatened syncope and nausea. Bettleheim records that in one case the hypodermatic injection of one-sixth of a grain induced alarming symptoms; and in another, one-eighth of a grain similarly injected caused unconsciousness, congestion of the face, irregular breathing and trismus. Cotter found unpleasant symptoms in more than one instance while using in the nasal cavities a solution as weak as ten per cent. Thus, in a young lady there was sprayed into these fossæ six or seven minims of a ten per cent. solution, and just as he was going to operate, the breathing became very difficult, the larynx seemed paralysed, distressing symptoms of cardiac and general depression appeared, and she was unable to walk for two hours. Hübner dropped about one and a half minims of a two per cent. solution into the nostril of a healthy young soldier previous to the removal of a polypus. This was soon followed by unconsciousness, an exceedingly weak pulse and cold skin. A case is reported by Ficano of a woman, forty-three years of age, who had for some time suffered from intolerable tinnitis, which accompanied a dry otitis media, with a diminution of hearing. A few drops of a five per cent. solution were introduced into the middle ear by means of a catheter, after the use of the Politzer method of insufflation. In a short time vomiting came on with cramps and diarrhœa which lasted for several hours, there was marked muscular inco-ordination, and symptoms generally analogous to those of sea-sickness.

There seems to be no doubt that cocaine is absorbed with extraordinary rapidity, and that the stronger the solution which is

locally applied the greater the danger of toxic symptoms, but whether the latter are to be attributed merely to the larger dose or to some obscure action is not apparent. Falk has found that the rapidity of absorption varies in the different tissues—absorption taking place most rapidly through the conjunctiva, then in the following order: nose, larynx, mouth and ear. It is generally conceded that a ten per cent. solution is sufficiently strong for most purposes and robbed of many of the dangers of those of greater strength.

The nature of the toxæmic symptoms varies so greatly that no rule-o'-thumb treatment can be set down: in some cases nervous and muscular excitement predominates; in others, respiration in the function most seriously affected; in others, the circulation, etc. Among the agents found useful are nitrite of amyl, strychnine, atropine, morphine, alcohol, ammonia, digitalis, chloral, seria-prisms over the heart and stomach, hot drinks and artificial respiration.

CORRESPONDENCE.

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PERISCOPE.

THERAPEUTICS.

THE EMPLOYMENT OF NAPHTHALINE IN THE TREATMENT OF TYPHOID FEVER.

Natanson (*Rev. Gen. de Clin. et de Therap.*, March 11, 1891) has communicated to the *Société de Médecine Pratigue* the results of his experience in the treatment of typhoid fever by naphthaline. He has employed the drug in 23 cases, and at different periods of the malady. The temperature and the diarrhœa were diminished within two or three days. The remedy was given daily three or four times, in doses of 15 centigrammes for adults, and 10 centigrammes for children. In order to continue the use of the medicament the stools and the urine should be carefully examined. The disappearance from the stools of the microbes, shows the success of the treatment; but a greenish coloration of the urine is a sufficient cause for the suspension of the drug. The remedy may be given in gelatine capsules or in water. To this treatment may be added as auxiliary, other tonic measures, such, especially, as cold-water baths. The healthy condition of the kidneys must be watched in order to avoid toxic phenomena.

HYPOSULPHITE OF SODIUM AND SILVER IN ATAXIA.

Dr. A. Radcliffe in the *Therapeutic Gazette* writes: Having a case of locomotor ataxia to treat, and fearing the danger of argyria from the nitrate of silver, I was induced to use the hyposulphate of sodium and silver, thiosulphite of sodium and silver, from a report published by Curci, in the *Medical News*, July 10, 1886, wherein it was claimed this double salt "did not coagulate the albuminoids, is very soluble in water, is not caustic, is diffusible, promptly absorbed by mucous membrane and connective tissue. Its taste is sweet, slightly nauseous. Should be given fasting or hypodermically, by mouth from 5 to 20 centigrammes daily, or hypodermically from 1 to 5 centigrammes daily. Its action is quickly obtained; the danger of argyria is avoided."

My patient was a lady, past middle life, and her trouble had been slow in coming on. The electric-like pains had been treated as neuralgia and rheumatism; the gastric trouble, as dyspepsia, with pepsin and nux vomica; while the difficulty in locomo-

tion was attributed to the rheumatism. She came under my care early in 1886. The first symptom she then complained of was the difficulty she had just experienced in coming up the stairs, owing to the darkness, and some stiffness in her limbs. Though she could walk from her house to the gate at night with considerable certainty, as she was familiar with the locality, yet if she stepped off the walk she would be compelled to sit down, because on the ground she could not get her bearings; that if she did not get back on to the walk, she would be compelled to crawl to the house, for on the ground she felt an uncertainty about her equilibrium. She does not walk on her heels, bringing the sole down with a flap; she walks slightly bent forward, that she may watch where she steps, for a very small obstacle, if stepped upon, is sufficient to cause her to fall. Though she stands with her eyes closed, yet there is a slight swaying motion of the body, such a feeling that she might fall, she does not like to try it. She stands and walks wide; the foot is not carried directly forward with a good knee action, but is held rather stiff and swung around.

She took at first ergot, to relieve some spinal congestion that troubled her in the mornings. Belladonna, she thought, gave little relief to the bladder-trouble (paralysis of sphincter), and annoyed her by the dryness it caused in the mouth.

She has taken the sodium and silver salt at intervals since 1887, or earlier, as high as 15 centigrammes (2¼ grains) a day, in all four or five drachms, and has lately commenced on another drachm. Soon after commencing the use of the silver salt her gait improved, and she walked with more ease and spring. She says the silver helped the pains in her limbs, that she could walk better after taking it, but it did not help her bladder-trouble.

Suspension, which she uses at home, she claims greatly helps the bladder-trouble; the only thing that ever did.

With the silver salt and suspension, she says, she can get along very well, if her household work is not too great; that without them she could hardly get along at all.

TREATMENT OF ERYSIPELAS BY ICHTHYOL.

An elaborate research, clinical and bacteriological, has recently been published by Professor Nussbaum's assistant, Dr. Julius Fessler, on the treatment of erysipelas by ichthyol, a plan which has been for some years extensively adopted in Munich. From laboratory experiments it was evident that, though ichthyol has only a slight effect in preventing the development of staphylococci, it has a very potent deterrent influence on the multiplication of streptococci, and it is well known that it is the latter kind of bacteria that are the cause of erysipelas. The method of treatment consists mainly of rubbing a strong ichthyol ointment energetically, and for ten minutes at a time, into the affected surface and its neighborhood; ichthyol in the form of pills may also be given internally. Where there is a wound it must be very carefully disinfected, and an antiseptic dressing applied. The results of this treatment, as compared with ordinary methods, are embodied in several instructive tables. From these it appears that, while the mean duration of the cases treated by other methods from 1880 to 1888 was about twelve days, in no single year falling below nine days, the cases treated by ichthyol from 1886 to 1888 presented a mean duration of under seven days, while in the first half of 1889 it fell to 5.6 days.—*Lancet.*

ON THE ACTION OF ATROPINE IN DISEASES OF THE HEART.

Dr. Cardarelli has experimented with atropine in sixty-five cases of various forms of functional cardiac disease, measuring the pulse with the chromograph of Verdin and the arterial pressure with the sphygmomanometer of Basch. His conclusions, which appear to be based on a most careful study, are published in *La France Médicale*, January 23, 1891:

1. Atropine, in doses of $\frac{1}{120}$ to $\frac{1}{2}$ grain, given hypodermically in man, manifests itself first in its action on the heart.

2. The action of atropine on the heart consists in the overcoming to a greater or less degree of the inhibitory influence of the vagus nerve.

3. As a consequence of this paralyzing action on the vagus, there is constant acceleration of the cardiac rhythm, which may be in certain cases accompanied by a slight transitory slowing.

4. Arterial pressure is reduced under the influence of atropine in direct proportion to the acceleration of the rhythm.

The author concludes with the statement that, when a clinician cannot use atropine in slight forms of irritation of the pneumogastric, in which there is no slowing of the pulse, it will be, nevertheless, a great error not to prescribe atropine in cases where a

permanently slow pulse is accompanied by epileptiform vertigo, and, above all, by syncope.—*Therapeutic Gazette.*

ARISTOL IN DISEASES OF THE EYE.

Aristol has been employed successfully by A. Bourgeois (*Union Méd du Nord-Est*, Feby., 1891), in eye diseases, such as ulcers of the cornea, traumatic keratitis, and wounds caused by foreign bodies, or the extirpation of an epithelioma. In a case of corneal ulceration he recommends the following treatment:

1.—Instillations of cocaine between the eye-lids.

2.—Frequent washings of the conjunctival cul-de-sac with a 20 to 1000 solution of the biniodide of mercury.

3.—Instillation upon the cornea of a drop of eserine, to be followed by the local application of the powder of aristol.

4.—Corrosive sublimate, dressing and bandaging.

The indications for the use of aristol in ophthalmology, according to the author, are those connected with the drying up of suppuration, or the cicatrization of wounds. The drug has advantages over iodoform as well as in infantile medicine.

DIGITALIS AND STRYCHNINE AS CIRCULATORY STIMULANTS.

Digitalis, caffeine, strophanthus, scoparius, and adonis vernalis constitute a most useful group of agents that exhibit an action upon the circulatory apparatus commonly spoken of as tonic or stimulant; but, when the physiological effects of these drugs are considered critically from the stand-point of their application to diseased states, it will be seen that their use is more limited than is generally supposed. The concomitant actions upon parts and functions of the organism, other than the heart and circulation possessed by each, frequently present a barrier to their employment, even where the circulatory symptoms would seem to indicate their prompt administration. The indications for the use of digitalis in heart affections are clearly understood, but the reasons for and against its use in many cases of a weakened and failing circulation do not appear to be as firmly established. This view of the question, together with strong arguments for the use of strychnine as a circulatory stimulant, form a basis of a valuable paper published by Dr. Bradfute (*New York Med. Journ.*, January 10, 1891), who, in the first place, maintains that in the class of constitutional diseases, especially those characterized by a continuous high temperature, accompanied by any of the various forms of degenerative change in the organs and muscular system, digitalis is not the remedy, and where these changes affect markedly the cardiac structure it is conspicuously contra-indicated. The action of the drug upon the muscular fibre is one of stimulation, followed by an increase in its force power, and if the fibre is surrounded by, or contains within, its substance granules or particles of fatty change, it can be readily seen that the indications are for the relief of overwork, and not to compel it to do what it is already physically incapacitated to perform. For example, in typhoid fever the condition just outlined is always present, and the administration of digitalis in doses sufficient to produce even a slight physiological effect cannot fail to do harm; but that this fact is frequently overlooked, and by practitioners of eminence, there is ample evidence. In addition to the ugly action of digitalis upon diseased heart-tissue, its property of contracting the arterioles, causing a rise in the blood-pressure, increases the total amount of cardiac work necessary to be done, which is so injurious as to result sometimes in practically a paralysis of the entire organ,—a mishap that has occurred after a sudden change from the recumbent to the erect posture in instances of undue exhibition of the drug where there was no interference by disease with the normal function of the heart-fibre. Its influence upon the inhibitory centres also offers an obstacle to its use when the above-mentioned objections may not exist, and on account of this it is well to remember that, as a rule, subject to modifications attendant upon exceptional cases, a weak and slow heart is not amenable to the curative effects of digitalis; rather is it a weak and rapid heart that presents the most favorable opportunity for the display of its peculiar action. Phosphorus-poisoning, typhus and yellow fevers, atheroma, and fatty heart are affections presenting a pathological anatomy contra-indicating the employment of digitalis, especially in the last stages of these diseases. Aside from its use in simple heart-disease, unless very skillfully handled, digitalis is only effective in the failing circulation of hemorrhage, shock, and certain acute affections, especially when the cardiac movements are very rapid, where the result desired is a bracing up, as it were, of the general circulatory apparatus until nature has time to recover herself. In

shock following head injuries, when the heart is slow, nitro-glycerine is the better agent, as it paralyzes the inhibitory centres and dilates the arterioles, thus promoting the activity of the heart and increasing the rapidity of the blood current. But in these instances there are no degenerative changes in the heart muscle to negative violent stimulation of the fibre. In acute phthisis, accompanied by an irritative fever and a rapid and sometimes tumultuous heart, digitalis is often very useful, but it is manifestly unsafe to administer it in large doses. The Harveian lecturer of 1890 calls attention to the independence of the systemic and pulmonary circulations, which opens up a new field for the study of pulmonary therapeutics; and it may be that future experiments and observations may preclude the employment of many of the drugs now used in lung-affections; but, under our present knowledge, digitalis is an excellent remedy for the failing heart of continued pulmonary hemorrhage and the gray hepatization stage of pneumonia. In the latter, digitalis does good so long as the heart does not beat below the normal rate; when the pulse drops below 70, some other remedy must be given. In the first and second stages of pneumonia, when active inflammation is going on, digitalis is out of place, as it only causes the heart to pump more blood into an already surcharged area, and can have but little influence over the temperature. In myocarditis, where exudative material is poured out in and around the muscular substance, digitalis adds insult to injury, and the interference with function from the disease is only increased.

From these few remarks it can easily be seen that some of the contra-indications that may be present in disease prohibiting the use of the digitalis, or a remedy having a similar action, are congestion and inflammatory obstruction in the pulmonary structure; degenerative changes in the muscular system, including the heart; general interruption of the nutritive processes, with accumulation of serum in the tissue; sudden cardiac failure; and all conditions in which the heart-beats are less than normal. Of course, no iron-clad rules can be laid down; but if the drug is given in maladies characterized by any of the above-mentioned lesions, it must be used with great care.

In selecting a remedy to combat a failing circulation, all the structural changes and diminished or lost functions must be accurately studied and the influences resulting therefrom duly considered. Without the intelligence accruing from such a consideration of a given case, it is impossible to apply a proper drug, no matter how well known is its action. A thorough knowledge of the normal physiological state of the patient, the pathological changes that have taken place, and the physiological action of the drug is essential to successful therapeutics, and in no instance is a familiarity with these three points more important than in a case of failing circulation.

In those protracted diseases in which this formidable symptom arises, the general condition of the patient may be summarized as follows: The muscular system is weak, flabby, degenerated, and ill nourished; the nervous system is reflexly disorganized; the nerve-conducting paths, chiefly at the periphery, are partially or entirely obstructed, so that tissue sensation and motility are interfered with and vaso-motor paresis is marked, thus checking normal physiological change in part or even in places completely; the secretory structures are either exhausted—not functionating—or their products are unfit for use; the circulatory apparatus is devoid of tone and strength; and the total area of blood space is increased, owing to paretic dilatation of the smaller vessels. In such a condition here presented the failing circulation is due not so much to the disease *per se* as to vitiated anatomical structure and physiological function, and the indications for treatment are plain. The prime object to be desired is the restoration of the function of the spinal cord, reflex centres, and nerve-endings. A drug that will do this causes a cessation in the destruction of tissue and less waste, thereby minimizing the the drain upon the nutritive elements of an already deteriorated blood; vaso-motor tonus returns, the arterioles and capillaries contract, the superabundant vascular space disappears, and hence a larger amount of blood passes through the heart at each cardiac cycle, stimulating its action and promoting its nutrition.

Strychnine seems to fulfill all the indications in the morbid condition above described, for the action of this remedy being expended upon the spinal cord and this part of the nervous system in conjunction with the sympathetic playing so important a *rôle* in repairing and maintaining the various processes of organic life, it is natural to infer that an intelligent stimulation of its functional activity would, under such circumstances, be a perfectly logical procedure, provided no structural lesion existed in its substance. Clinical experience seems to

have established the truth of this reasoning, and Dr. Bradfute extends this evidence with the report of several cases in which symptoms of profound collapse were overcome by the use of strychnine. Its administration must, however, be guided by the effect produced. $\frac{1}{30}$ grain of the sulphate may be given hypodermically every two hours, or oftener if nesessary, until there is the desired response. It is interesting to note that in such a condition of the system large amounts are easily borne, especially if the patient has been taking large amounts of alcohol, and the author states he has given as much as four grains in twenty-four hours without producing toxic symptoms. The failing circulation of diphtheria is a typical one for the exhibition of strychnine, for in this affection in its severer forms we have all the conditions present to which its action is antagonistic.—*Therapeutic Gazette.*

THE TREATMENT OF CHRONIC RHEUMATISM.

The following prescription is recommended in the treatment of chronic rheumatism, by Fothergill (*Prog. méd., Jan.* 10, 1891).

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Arsenious acid	1.20 grammes.
Powdered guiac	12 "
Pulverized capsicum	2 "
Aloes and myrrh	12 "

Make 120 pills. A pill to be given 3 times a day, together with a diet rich in fatty substances.

MEDICINE.

BRIGHT'S DISEASE FOLLOWING INFANTILE PURPURA.

A Moussous (*Rev. mens. des malad. de l'enfance,* Feby., 1891, p. 62) reports two cases of purpura in children, followed by Bright's disease. In one of them, that of a child ten years of age, suffering from a rheumatoid purpura, with hæmatemesis, albuminuria with œdema of the extremities and face, and disturbances of sight, came on two months afterwards. The second case was fatal. It occurred in a child, aged thirteen years, who had likewise gone through an attack of purpura. Hæmaturia, albuminuria and anasarca followed, accompanied with petechial eruptions, the patient dying four months afterwards with uræmic and dyspnœic symptoms. Post-mortem examination showed enlargement of the kidneys, and under the microscope lesions due to a diffused nephritis were observed.

A CASE OF PERNICIOUS ANÆMIA OF PARASITIC ORIGIN.

Dr. M. Kotcher (*Bolnitcheraja Gazette, Botkina,* November 1st, 1890) quotes a number of authors who are against and for the fact of intestinal parasites, especially Tænia Solium and Botriocephales Latus, often inducing pernicious anæmia with all its symptoms and signs. The majority of the quoted authors submit to the fact that very frequently desperate cases of pernicious anæmia have been known to occur in practice which depended immediately upon the mentioned parasites. In the author's own case, which was a typical one, of pernicious anæmia, improvement followed after the expulsion of the parasite. He believes that the presence of the tænia and Botriocephalus does, in many cases, cause the whole train of signs and symptoms mentioned, as characteristic of idiopathic pernicious anæmia, and quotes amongst others, Dr. Roosevelt (*N. Y. Medical Record,* 1888), who believes in the same.

CARDICE NERVE STORMS, OR ESSENTIAL TACHYCARDIA.

Dr. H. C. Wood, in a study of several important cases of this nature, in the *University Medical Magazine,* gives some interesting points.

The definition of the disease, he writes, would be a recurrent paroxysmal neurosis, in which attacks of excessively rapid heart action occur without obvious immediate or predisposing cause, and without pronounced pain or excessive cardiac distress, the pulse rising to 160 and upward, the sounds of the heart remaining normal; and it being frequently possible to arrest the attacks by drinking a glass of cold water and certain other procedures of apparently trifling import; the disease having apparently no tendency to shorten life or to develop organic disease, and being entirely compatible with great mental and physical activity.

The length of the attacks was from a few minutes to several hours. Sometimes they would be shortened by the patient taking a long breath, and whilst still holding his breath, drinking a glass of cold water. When about half a glass was taken the heart would suddenly quiet down, three long slow beats would follow one another and the normal beat be attained. Sometimes, however, the attack, instead of being shortened by this procedure, would be only momentarily interrupted. There was no evidence

of valvular or other heart disease during or between the paroxysms.

One of the most curious phenomena of tachycardia is the arrest of the paroxysms by the swallowing of cold water, which is probably a characteristic feature of the disease, since it has been noted in almost all the elaborately observed and reported cases. It affords a plausible argument against the probability of the rapid pulse being due to pneumogastric paralysis, since Dr. S. Meltzer has shown that swallowing is attended with a loss of tone in the vagi centre, and consequent weakening of cardiac inhibition and increased frequency of the cardiac beats. It is, however, probable that the arrest of the tachycardiac paroxysms by the swallowing of hot or cold liquids, is due to stimulation of the inhibitory cardiac centre, produced by irritation of the peripheral nerve filaments of the stomach. It is a well-known physiological fact that irritation of the abdominal nerves is capable of reflexly inhibiting the heart, and in one case it was found that the best method was to swallow the water as rapidly as possible and as cold or as hot as could be taken; if the water is only moderately cold, much larger quantities of it are required.

AN EARLY ATAXIC SIGN.

Weiss, of Vienna, says that an early symptom of locomotor ataxia is an inability on the part of the patient to walk backwards, while as yet, and in other ways, he may be able to walk with firmness and rapidity. Perron, of Bordeaux, has also, as we stated several weeks ago, recently suggested an early diagnostic sign, which is simply a modification of the Romberg test,—namely, causing the suspected ataxic patient to stand upon one leg, instead of two, with the eyes closed. If the patient shows a tendency to fall, it may be inferred that the spinal trouble has begun which will lead on to locomotor ataxia, even if the Romberg test fails, as it not infrequently does in cases that are not well advanced.—*New York Medical Journal.*

CHLOROSIS AND ITS TREATMENT.

Dr. Frederick Scholz, of Bremen, has published a remarkable work on chlorosis, the outcome of observations made during the last twenty years. Instead of regarding the deficiency of iron or hæmoglobin, or even that of the red corpuscles, as the primary affection, he states that contraction of the vessels is always present in these cases, as indeed was observed by Bamberger, Rokitansky, and Virchow; and this, he contends, is not to be regarded as a complication due to an altered condition of the blood, but as the primary condition which is followed by the morbid change in the blood. As a matter of fact, the vessels are, he says, too full, or in the condition termed by the older physicians "plethora ad vasa," the blood being—or becoming—abnormally serous. Long ago his attention was struck by the cold and livid condition of the skin in anæmic subjects, and he was led by this to employ hot baths, together with gentle friction, in the treatment, with the view of acting directly upon the skin, so as to improve the vitality and nutrition generally. The success of his first attempts was so marked that he was encouraged to persevere in this line of treatment, and he has since had many opportunities of extending his experience with it. Hot baths diminish the plethora by relaxing the tension of the vascular system, which is high, quickening the circulation, and thus relieving the palpitation, dyspnœa, and other symptoms. In thirty cases where the distress of the patient was very great, Dr. Scholz has gone a step further and supplemented the hot bath by venesection. Paradoxical as this treatment may appear, it was followed by marked benefit, and if the theory of the pathology of chlorosis above mentioned be correct, there can be little doubt that the novel line of treatment practised by Dr. Scholz is justifiable.—*Lancet.*

SURGERY.

SURGERY OF THE LIVER.

An excellent paper on the surgery of the liver, based upon nine very careful observations, is published by Terrillon (*Bull. Gener. de Therapeutique*, Feb. 15, 1891). The subject is studied under the topics of *Puncture and Incisions; Operations upon the Gall-bladder; Opening of Hepatic Abscesses;* and *Resection of the Liver.* The author arrives at the following interesting conclusions:

1. The surgery of the liver only demands special precautions which can easily be applied. Under ordinary antiseptic measures, punctures of the liver are inoffensive.

2. The gall-bladder can always be opened and drained. This operation is known by the name of *cholecystectomy.* If there is obstruction of the ductus choledochus, opening of the gall-bladder is a simple palliative. When it is permeable, the cure is rapid, and

no fistula will remain. Nevertheless cholecystectomy should not be practiced unless under special indications. Its utility is not unfrequently doubtful, whereas simple incisions with proper drainage give equally good results.

3. The ablation of a piece of liver is an easy and benign procedure. To insure hæmatoris a band of caoutchouc may be placed between the healthy portion and the diseased part.

THE PROPER TIME OF DAY IN WHICH TO OPERATE.

Surgeons have been divided in their opinion as to which part of the day is the most favorable for the performance and successful outcome of operations. The *British Medical Journal* discusses the matter in a recent number, stating that the advocates of morning operations assert that the patient is thereby saved the suspense of waiting until the afternoon, and that a better supply of sun-light, or its equivalent, can be depended on. Others, instead, say that morning operations imply an anxious and sleepless night for the patient, and that as night comes on more rapidly when the operation is performed in the afternoon, better chances for the patient's rest and sleep are secured. They also state that long operations seriously tax a surgeon's nerves and strength, and that for that reason the afternoon is preferable. In this respect we cannot altogether agree with them, thinking that by morning operations the surgeon secures the time at which he is best provided with muscular and nervous force, that have not been exhausted by the forenoon's work. We are also inclined to think that whether the operation be done early or late, its influence upon the previous night is about equal in either case. Those who operate frequently in the afternoon know the discomfort of finishing their operations by artificial light.

The *Journal* states that wherever freedom from noise and plenty of warmth can be procured, especially in summer, morning is probably the best time. We are inclined to think that, as darkness comes early in winter, morning operations are also indicated at that season.—*International Journal of Surgery*, Feb., 1891.

A NEW METHOD FOR THE TREATMENT OF INJURIES TO THE SHOULDER.

Dr. Monks reports about twenty-five cases, including some in which rheumatism undoubtedly played a prominent part. In most of the cases the ordinary methods of treatment had been tried in vain. The result was a more or less perfect cure in about two-thirds of all cases tried, in a period of time varying from a few days to a few weeks. The most hopeful cases were those which were purely traumatic. The principal involved in the treatment was that the shoulder is more perfectly in a condition of actual rest when the arm is *supported at right angles to the trunk*, than when the elbow is kept at the side, because (1) the weight of the upper extremity is thus entirely taken off the shoulder; (2) the deltoid and other structures covering the joints are relaxed; (3) the circumflex nerve and other deeply seated structures are relieved from pressure. In applying this method of treatment, the whole weight of the upper extremity is taken upon the platform-shaped splint, which is supported by a firm band of webbing passing over the other shoulder. The cases for which this form of treatment is especially adapted are, those where the prominent symptoms are persistent pain and tenderness in the shoulder, or inability to raise the elbow from the side.—*Boston Med. Journal.*

THE PREPARATION OF LIGATURES.

Dr. J. Schou (*Ugeskrift for Læger*) recommends the following methods of preparation:

1. Sublimate Catgut: Commercial catgut is wound upon glass spools and placed in 5 per cent alcoholic solution of corosive sublimate. This solution is changed repeatedly until it remains clear (Bergmann). Another method is to place the catgut in a 1 per cent. solution of sublimate for twelve hours, and then to preserve it in a one-half per cent. sublimate solution containing 10 per cent. of glycerine (Schede and Kümmell).

2. Carbolized Catgut: Commercial catgut is wound upon spools, and placed for forty-eight hours, in a 5 per cent. solution of carbolic acid. It is then transferred to a vessel containing a fresh solution of the same strength, when the gut is removed from the spool, and then again firmly wound upon it and preserved in a 5 per cent. solution of carbolic acid in alcohol (Block).

3. Carbolized Silk: The silk is boiled in a 5 per cent. carbolic solution for a period varying from ten minutes to an hour and a half, according to the strength of the silk, the fluid being renewed every half hour. The silk is preserved in 2 per cent. watery solution of carbolic acid (Czerny).

4. Sublimate Silk: The silk is boiled for two hours in a 1 per cent. sublimate solution, and preserved in a 1 to 1,000 solution

(Schede and Kümmell).—*Deutsche Medizin, Zeitung*, Jan. 22, 1891.

Transplantation of Tissue from Lower Animals to Man.

The case of transplantation from an animal, recently performed at Charity Hospital, New York, by Dr. A. M. Phelps, has commanded a wide-spread attention, and all sorts of absurd rumors have been circulated. The operation is a success in so far as it establishes the principle that it is possible to grow large masses of tissue from an animal to man, and to establish the circulation until the union takes place between opposite species without danger to either. It also demonstrates that a growth of new bone takes place when a section of bone is transplanted and its nutrition maintained by the artery of the animal. This, if continued four or five weeks, would probably unite a fracture. Owing to the inefficient dressings which are apt to occur in early operations, the contact of the transplanted bone could not be continued sufficiently long for bone to unite to bone. Dr. Phelps is confident, after viewing the specimen, and taking all conditions and surroundings into account, that bony union would have taken place if actual contact had been maintained for a longer period. The stimulation of the graft, however, has excited a reparative process in the fracture, and it now promises fair to unite. The boy walks with the aid of one crutch, or a cane.

History of the case.—In the month of November, last year, the patient at Charity Hospital was sent to Dr. Phelps for operation. Briefly, the history of the case is this:

The lad, John Gethins, was suffering from an un-united fracture of the lower third of the leg, the result of an operation to remedy an anterior curve of the tibia, which had existed and had slowly increased from early childhood, until he was compelled to go upon crutches.

There was no paralysis of the limb, neither was it atrophied, excepting from non-use; the muscles were perfect in every respect.

A few months after the operation of osteotomy, Dr. Phelps cut down upon the fracture and wired it, but failed in getting union. After a few months he again operated, removing all cicatricial tissue, carefully stitching the periosteum together, and wired the bone. This failed. A few months later he again cut down upon the fracture, removed all cicatricial tissue, and again freshened the ends of the bone, and engrafted decalcified bone chips, according to Senn's method. This failed; the chips came away from the wound a few weeks after the operation. He then resorted to Thomas's method of hammering, damming, and adjusting an appliance for the boy to walk upon. This he wore for several months, but again he failed to secure union. In the mean time the boy had returned to his home.

It seemed a pity to amputate the leg. He had arrived at that stage of the case where, so far as our present knowledge was concerned, amputation was the last and only step to be taken. With all of these facts before him, Dr. Phelps felt justified in attempting any experiment which would promise to succeed in restoring the limb to usefulness, provided the danger to life was not too great.

The brave lad had submitted to every means known to surgery for the relief of his condition, and, discouraged and heart-broken, had returned to his home. When he was told there was another chance for his limb, his face brightened, and he said, "Doctor, I will take that chance." After consulting with the members of the Medical Board, of Charity Hospital, and several eminent surgeons of this city, he decided upon an operation.

It is a well known surgical fact that an amputation performed in the growing limb below the knee, or in the humerus, frequently results in what is known as a conical stump.

This necessarily leads to re-amputation, and many amputations have been performed from year to year, in the same case, for this abnormality. This was one of the reasons, but not the greatest, why he hesitated to amputate the limb.

A dog two years old was secured and prepared for the operation, carefully cleansed with soap and water, and made aseptic with a solution of bichloride of mercury.

While the patient was being anæsthetised and the ends of the fractured bones freshened, his assistants, Drs. Plimpton and Mooney, prepared the dog, in the following manner: She was etherized, and then enveloped in a thick layer of absorbent cotton to the thickness of several inches, while placed in the natural sitting posture. Over this soft covering of cotton a few turns of a plaster-of-Paris bandage were made, to hold the dressing in place. The dog was not encased in plaster-of-Paris; the right foreleg of the animal protruded through the dressing. This leg was carefully shaved, and again made aseptic with bichloride of mercury, and finally with ether. The dog was now ready for the operation.

Two elliptical incisions were made down to the fracture, four inches in length, removing the old cicatrix and cicatricial tissue about the ununited ends of the bone, together with an elliptical piece of the soft parts. With a saw the ends of the bones were freshened, leaving a space about one inch between them. The portions removed proved to be eburnated, and more like ivory than bone.

The limb of the patient was now prepared for the next step in the operation, by enveloping it in a plaster-of-Paris bandage, commencing six inches above the incision, and extending to the upper third of the thigh. The foot and ankle were also covered with a plaster-of-Paris bandage. While the surgeons were preparing this part of the dressing, the assistants were preparing the dog. An incision was made through the skin, for the purpose of cutting a piece which would accurately fit the elliptically-shaped wound in the patient's leg. The elbow was now quickly excised; the radius and ulna were severed one-half inch in front of the elbow-joint, and the humerus three inches above it, and removed.

The extremity, near the paw, was amputated, leaving a piece of bone one inch in length, attached to a branch of the brachial artery among the soft parts.

The attachment of the biceps tendon was detached from the bone and loose superfluous muscular tissue removed. In the dog the nutrient artery enters the bone one inch in front of the elbow-joint. Cutting the bone, as indicated above, saved the nutrient artery from injury, and secured the nutrition to the fragment of bone, from which it was hoped that new bone would be thrown out, and at the same time stimulate the human bone to a reparative effort.

The dog was placed by the side of the patient's leg, the head toward the patient.

An aluminum dowel-pin was passed through the medullary cavity in the long axis of the bone. This was though a mistake. A steel pin inserted into the solid portion of the bone would not interfere with the circulation so much. The piece of bone was placed between the ends of the bone of the patient. The bones were crowded together, the dowel-pin entering the bones of the patient above and below. A silver wire was passed around the entire graft, and securely tied. This held the bone securely in place. Muscle was stitched to muscle, and skin to skin, the parts being evenly coaptated. A large drainage tube was inserted for drainage, which opened posteriorly. A few turns of the plaster-of-Paris bandage secured the iron rods to the leg. The wound was dressed antiseptically.

Through the entire operation the most rigid antiseptic methods were carried out. Constant irrigation prevented the possibility of wound infection. The operation can be performed in an hour with efficient dressers. The operation appears difficult and complicated, but is quite simple when understood.

The patients (for we must now say patients) were put to bed. Both recovered from the anæsthetic rapidly. Small doses of morphine were used for both, from time to time, to allay, not so much the pain, as the uneasiness caused by the forced confinement. After three days this uneasiness passed away, and from that time on the dog and patient became friends, administering to each other's comfort—the patient by feeding and playing with the dog, and the dog by vigorous wags of the tail which showed her appreciation of the kindness.

Before the operation was performed the vocal cords of the dog had been carefully severed, under ether, to prevent any disturbance of the patient. At the end of two weeks, however, the cords had again re-united, and the voice of the dog sounded fully as strong as before the operation. The only pain caused to either patient was the twitching of the muscles of the dog as she shrank in her bed from the loss of adipose tissue. This might have been prevented by a simple procedure at the time of operation.

On the sixth day the case was dressed. The wound was found perfectly healed by primary union, without a single drop of pus. Only for the difference in the color of the skin it would have been difficult to detect the line of union. On the eighth day it was again dressed and the union was still perfect and more firm. Finally at the end of eleven days, there was an apparent shrinkage of the dog in the dressings. This allowed of motion, and it became evident that the graft would be pulled from its attachment within a few days. Consequently, as much as it was desired to continue the experiment, Dr. Phelps concluded as an act of humanity to sever the bond of union. He was prepared to do this the moment that he discovered that any surgical interference would become necessary, which would inflict additional pain to either, in order to continue the experiment.

The dog was chloroformed during the operation.

While the graft was being trimmed, and the leg of the patient dressed, the artery was

secured and nicely stitched up the stump of the dog's leg. She was then placed in bed and cared for by the nurse. As the graft was trimmed down to the parts still attached a free oozing of blood took place through the graft, which demonstrated the fact that union had taken place and that circulation had been established between the patient and the dog. Both patients rapidly convalesced. The boy spent his time writing letters to his friends and reading the papers and postal cards from persons praying that the effort to save his leg might not be a failure.

The wound was dressed and the graft examined daily. At the end of five weeks it was discovered that the bone showed no further sign of uniting, and desiring to give the boy every chance for union of the fracture it was removed. The rods, also, were removed, and the ends of the patient's bones placed firmly together, hoping to secure union because of the stimulation produced by the graft. The bone graft was irregularly covered with a new growth of bone, thus proving, he believed, that an effort had been made to unite the fracture.

This was the result of eleven days' contact, whereas at least thirty days are required for bony union to take place.

The canal of the bone was also filled with a new growth of bone, excepting where the dowel-pin passed through.

The average temperature recorded in the patient was about 99½°, in the dog 99 $\frac{4}{10}$. The average pulse of the boy was about 95. The normal temperature of the dog is above a hundred, that of the human being 98½° F. The temperature of the dog fell to below a hundred and that of the boy rose to near a hundred, or the same as that of the dog, where it remained for weeks. The pulse of the boy rose and the dog's fell until they beat nearly the same number of beats per minute, varying from ninety to one hundred and ten. The boy ate, slept, and felt well. There was no sepsis. Whether this peculiar condition of temperature and pulse was due to the interchanging of blood between the animal and the patient, he was unable to say; further observation is necessary to verify it.

After the eleventh day, owing to the plaster-of-Paris accidentally getting into the wound, pus for the first time was seen. This rapidly disappeared.

The operation had a two-fold object: first, to establish the fact that large masses of soft parts could be transplanted from an animal to man; second, to unite an ununited fracture by a section of bone from the dog. It was successful in demonstrating the first proposition, but partially failed in the other in so far as the actual growing of the bone into place is concerned. This was due entirely to a defect in the dressings. The principle of transplantation established means much to humanity; its application will be found useful in many cases which now defy the best efforts of the most skillful surgeons in the world.

Among the cases suitable for the application of the principle are those cases of fractures which resist all efforts for their union, and which must necessarily result in amputation; ulcers of a particular class which can be cured by no means known to surgery. Scalps ripped from the heads of factory girls by machinery. Months and often years have been taken to skin-graft back the scalp to cover the skull, and numerous friends have been flayed to supply the material.

Thiersch's method of skin-grafting has been a step in advance of the older methods, but a martyr must be found to submit to the flaying. A dog would be found better adapted for the work as hair could be transplanted with the flap. Sloughing, following amputations in the upper third of the tibia resulting in cicatricial contraction with indolent granulations covering the end of the stump caused by the bad circulation from pressure are now cured. But how? By amputation at the knee-joint or else so near to it that an artificial limb cannot be worn without a useful knee-joint. Animal transplantation should be resorted to before amputation is performed.

If circulation could be established between opposite species, the elements of whose blood differed, without injury to either, a step would be taken which might lead to the relief of many a sufferer. Then large masses of tissue could be grafted from an animal to man, the circulation of the animal furnishing that which the patient could not supply, as in bone-transplantation. Or in grafting of soft parts the circulation of the dog would keep alive the graft until it had become firmly united to the patient, then it could be severed.

In bone-transplantation it was expected that in four or five weeks the animal would have thrown out a provisional callus and at the same time stimulate the fracture to repair. A dog was selected because the elements of its blood very closely resemble those of man. The reparative energy of a dog is very strong and his power of endurance great. No unnecessary cruelty is inflicted and aside

from the confinement but little suffering occurs. Of course, it is useless to reply to those who have denounced the operation as cruel and unnecessary. Those who understand the motive which actuates the surgeon, can comprehend how, with all sympathy for the brute, his sacrifice of limb may be demanded for the good of his master, man. They, too, can appreciate the reluctance of the surgeon to inflict wanton suffering, whether upon man or brute, and can understand how such an operation only seemed commendable when a more than commensurate benefit was promised. To those whose eyes are blind to human suffering, and whose sympathies are all for the brute, we have nothing to say.

This poor lad personally demanded that every means should be exhausted which promised relief before amputation should be resorted to. He still demands it, and the demand is one which a humane surgeon should consider before resorting to an operation which would involve the loss of a limb and possibly life.

GYNÆCOLOGY.

WHAT EXPERIENCE TEACHES ONE TO UNLEARN.

One of the most respected gynæcologists of this country, Prof. William Goodell, in the *University Medical Magazine*, has recently stated that "every earnest worker in any field of the inexact sciences finds himself compelled to unlearn as well as to learn," and on this basis he communicates a sketch of a number of things, chiefly traditional teachings, which he has himself, in his own experience, learned to unlearn. His summary, of course, relates to the special branch of which he has been a distinguished teacher and practitioner; but many a general practitioner, if he were as honest and candid, could teach his professional brethren similar lessons. Among other things cited by him are the following:

He has learned to unlearn the grandmotherly belief that the climacteric is in itself an entity, and that, as such, it is responsible for most of the ills of matronhood, and especially for that of menorrhagia.

He has learned to unlearn that anteflexion and anteversion in themselves—that is to say, as displacements merely and without narrowing of the uterine canal—are necessarily pathological conditions of the womb.

He has long since abandoned the idea cherished by that class of waistless and witless nurses, now happily obsolescent, that the parturient woman is to be swathed like a mummy and to be kept as immovable.

He expresses his disbelief that mammary abscess comes from "caked" breasts, or from breasts overdistended from a secretion of milk too great for the infant's needs. Mammary abscess, in the suckling woman, comes, in his opinion, from cracked nipples, and from cracked nipples alone.

He has wholly freed himself from the belief that cellulitis is at the bottom of most female ailments, and that the hot-water douche is its cure-all.

He has learned to unlearn the teaching that woman must not be subjected to a surgical operation during her monthly flux. Our forefathers, from time immemorial, have thought and taught that the presence of a menstruating woman would pollute solemn religious rites, would sour milk, spoil the fermentation in wine-vats, and much other mischief in a general way. Influenced by hoary tradition, modern physicians very generally postpone all operative treatment until the flow has ceased. But why this delay, if time is precious and it enters as an important factor in the case?

Long ago he came to the conclusion that the womb, like the nose, has its own secretions; and that, because the cervical canal is stopped up with mucus, it is not to be treated any more harshly than a stopped-up nose. This nasal analogy led him soon to think that even uterine catarrhs are not of such paramount importance as to merit heroic treatment, and that metritis and endometritis, in so far as symptoms are concerned, are often idle words.

He has learned to unlearn the idea—and this was the hardest task of all—that uterine symptoms are not always present in cases of uterine disease; or that, when present, they necessarily come from the uterine disease. Seemingly urgent uterine symptoms may be merely nerve-counterfeits of uterine disease. He has, therefore, long since given up the belief which, with many, amounts to a creed, that the womb is at the bottom of nearly every female ailment. As an outcome of much that he has learned to unlearn, Professor Goodell has arrived at this very short gynæcological creed: "I believe that the physician who recognizes the complexity of woman's nervous organization, and appreciates its tyranny, will touch her well-being at more points and with a keener perception of its wants, than the one who holds the opinion that woman is woman because she has a womb."—*College and Clinical Record.*

ENDOMETRITIS AND ITS TREATMENT.

Dr. Paul F. Mundé, in speaking of a patient having what is known as a chronic endometritis, said that this is not a proper name to give it, because there is no inflammation present. Continuing his remarks he said:

Now, that you may more clearly understand this condition, and the manner in which this discharge is brought about, I will try and explain its mechanism to you in as few words as possible. After confinement the membrane which lines the cavity of the uterus is, as you know, shed, and a fresh mucous membrane is formed beneath it. If this membrane were shed off at once, it would leave underneath it a raw, bleeding surface, which is not mucous membrane at all. This process of shedding is, however, a gradual one, and it takes about two months before a new membrane has been formed and the uterine mucous membrane has returned to the same condition.

The treatment resolves itself into drainage and the application of mild astringents or caustics to the endometrium. I think the tincture of iodine will answer best in this instance, though iodized phenol for a first application might be preferable. In applying this fluid it is necessary to protect the vagina from injury by a pledget of cotton or other material, for carbolic acid or iodine will destroy the epithelium of the vaginal wall.

This application is made by means of a cotton wrapped applicator, which after its introduction into the cavity of the uterus, should be permitted to remain there for a minute or so, for by too rapid a withdrawal of the instrument, you are very apt to tear away the eschar that may have formed as a result of the application. Have your tampons of tannin and iodoform ready, so that you can apply them on withdrawal of the applicator. Instruct your patient to keep quiet the rest of the day, and remove the tampons on the following morning, and use hot douches at a temperature of 110° or 115° F., with the patient in a recumbent position. In about four days you may again repeat this intra-uterine medication, and if you then find that there is little or no oozing, you can conclude that you have done enough cauterization, and apply the compound tincture of iodine in the same way. The latter treatment may have to be kept up for several weeks or months.

There are various other ways in which these applications can be made to the endometrium, besides the one I have just alluded to. The practice of injecting iodine or other fluids by means of a syringe into the uterus is certainly a much more efficient method, but it may prove so very efficient that you will not desire to try it a second time. I have seen uterine colic follow its use, and the uterine colic thus induced, is apt to be so severe as to bring on collapse. There have been cases of death from peritonitis, occurring as a result of this procedure. I therefore, warn you against this method of applying these medicinal agents to the interior of the uterus. Some years ago I devised a fine syringe with a point no larger than a sound, perforated with numerous little holes, with which I made applications to the uterine cavity. I used a weak solution of nitrate of silver for this purpose, but found so much pain followed its employment that I have refrained from resorting to this method for the past four or five years.

Another form of making applications to the interior of the uterus is by means of pencils of gelatine, containing the medicinal agents you wish to employ. There is one great drawback to this procedure and that is the impossibility of obtaining gelatine pencils that remain soft and flexible. I have had a large number of these pencils prepared, but have discovered that in the course of a few weeks they become so hard that they act as irritants, and give rise to severe colic.

Another agent I employ to a great extent for intra-uterine medication is a fifty per cent. solution of chloride of zinc. This is a very effective remedy, but it is necessary to keep the patient in bed after using it. It should be applied but once in ten days, and only a few times in any given case.

The *sine qua non* for intra-uterine applications is a patulous uterine canal, with the external and internal os so wide as to permit the passage of a good-sized applicator, wrapped with a large film of cotton, up to the fundus, if you choose. Of course, in all instances, the removal of the cause of the affection by appropriate remedies, if yon can do so, is the proper course to pursue, whether that cause be pelvic congestion, prolapse, constipation, abdominal plethora or some other condition.

OBSTETRICS.

ANÆSTHETICS IN RELATION TO MIDWIFERY.

W. R. Reid (*Glasgow Medical Journal*).—In the course of a discussion on anæsthetics at the Glasgow Medico-Chirurgical Society, observed that chloroform and ether

were equally valuable for securing thorough anæsthesia in operative midwifery. For the administration of chloroform he preferred a single ply of flannel on a small wire frame used with a drop-bottle. In this way a mild degree of anæsthesia could be readily kept up, and deepened in a minute or two if required. In the case of ether he advocated the use of Clover's inhaler as the only safe plan. He had, indeed, substituted ether by the open method when a patient seemed very weak, and no bad result followed. On the only occasion, however, when he used ether during a lengthened operation the patient was ill for a fortnight afterward with bronchitis and congestion of the lungs. The ether was administered on a sponge in a water-proof cone. Ether had been given in a recent case by Clover's inhaler with perfectly satisfactory results. While he always examined the heart before giving an anæsthetic, yet the knowledge that heart disease existed only made him more anxious to use chloroform or ether, "because in such cases the strain of a severe labor is vastly more dangerous without an anæsthetic than with it. The same holds good with regard to diseases of the kidney." After five-and twenty years' experience of anæsthetics in midwifery cases, Dr. Reid said he had never seen a fatal issue. While his experience of chloroform had been very large, that with ether had been just as limited. "A lying-in woman is peculiarly fitted for escaping the dangers usually connected with anæsthesia. The left ventricle of the heart is considerably hypertrophied, and so less likely to weaken readily in its action. She is kept in the recumbent position, and so, to that extent, defended from syncope. The action of the heart is aided by the alternate relaxation and contractien of the uterus, and, lastly, the anæthesia tends to produce anæmia of the brain, whereas the labor pains give rise to an engorgement of that organ. These causes, taken together, seem to me to account for the great rarity of fatal results in connection with obstetrical anæthesia." He is inclined to believe that there is some truth in the assertion that chloroform may kill a lying-in woman by inducing post-partum hæmorrhage. That danger, however, can be quite set aside by the use of the subcutaneous injection of ergotin and by manual compression of the uterus. He has good reason for believing that chloroform has no danger to the fœtus. He admits it is hard to explain why, with chloroform circulating in the blood of the mother, the fœtus should not run a good deal of risk. He comes to the following conclusions: "1. In severe labor and the ordinary operations I am content to use chloroform in view of its convenience and safety in those circumstances. 2. In long and severe operations, especially where there is much loss of blood, I prefer ether, given by means of Clover's inhaler. This involves more trouble, but its probable greater safety ought to turn the balance in its favor. 3. I hold strongly the belief that while it is advisable to have two medical men present when an anæsthic is given, it would be wrong to enforce this by law.—*Archives of Gynecology.*

THE DIAGNOSIS OF PLACENTA PRÆVIA BY PALPATION.

Spencer reports in detail seven cases of placenta prævia in which he diagnosticated, by abdominal palpation, the presence of the placenta in, or its absence from, the front wall of the lower uterine segment, the diagnosis being subsequently verified by internal examination. The cases were head presentations in multiparæ before pains were present and before the membranes had ruptured; no anæsthetic was used.

In three cases the exact site of the placenta on the front wall of the lower segment was determined; in two cases the placenta was felt when by vaginal examination it could not be found. The absence of the placenta from the anterior wall was diagnosticated in four cases.

The patient should lie on her back for these examinations, the bladder having been emptied; the examination should be gentle, made in the absence of pains, prolonged for several minutes, or repeated, if needed. When the placenta is in front of the head, it is felt as a spongy mass between the fingers and the head. Its edge feels like the segment of a circle, within which the touch is obscured; outside the child is plainly felt. Impulses to the head through the placenta are distinctly felt where the placenta is absent.—*American Journal of Medical Sciences.*

PÆDIATRICS.

THE TREATMENT OF WHOOPING-COUGH.

In a lecture delivered at the Hospital for Sick Children, Paris, Jules Simon (*Journal de Médicine*, 1890, p. 577) remarks that the treatment of the first period is of great importance, for the future progress of the case depends upon the care which is given to it at that time.

One must be well convinced, contrary to the method which was followed formerly, of the necessity of keeping the child indoors; it is often even necessary to keep him in bed as one would do for a serious attack of bronchitis. Archambault has insisted upon the importance of this fact, and since Simon has adopted the same plan he has observed almost no complications in whooping-cough in children who were cared for in time. The pharmaceutical means are not to be neglected, but at best are only secondary; belladonna is, perhaps, the best of all. It is well to employ the following formula: Tincture of aconite root, tincture of belladonna, elixir of paregoric, equal parts—ten, twenty, or thirty drops a day, according to the age of the patient; if there is fever increase the aconite, or if intestinal catarrh increase the paregoric. Chloral may be given in the evening and sulphate of quinine in the morning. These drugs may be used by injection, the former in 15-grain doses, and the sulphate of quinine in three- to five-grain doses, especially if the heart is agitated. We must combat the catarrhal secretions if they are too abundant; under these circumstances an emetic may be given once a week; with the infusion of wild narcissus (daffodil) given every two or three days one obtains a state of mild nausea which favors the expulsion of the secretions; rhatany will also diminish them; of this we may give from three to five grains of the extract before each meal. Coffee is advised, to combat the dyspepsia. The treatment for the third period is that directed to the bronchial adenopathy; it consists principally in the use of tonics, iodine, cod-liver oil, etc., and later, an outdoor life.

To the remedies referred to above, one may add, with advantage, in certain cases, henbane, to combat the meteorism, in doses of from two to ten grains a day, warm friction of the abdomen with chamomile oil, containing tincture of nux vomica, 4 parts to 100, combined with digitalis when there is anuria, a thing that often happens.—*American Journal Medical Science.*

TREATMENT IN CONVULSIONS IN CHILDREN.

In a case of convulsions in a child, if the patient is cyanotic, a few whiffs of amyl nitrite, followed by inhalations of chloroform to relax spasm, should be given. These should be followed as soon as possible by hypodermic injection of tincture of veratrum viride, one-half drop for each year of age up to six years. The veratrum may be repeated in half an hour or an hour, if the convulsions recur. If the convulsions are uræmic, a small dose of morphine may be added or given separately. In all the cases in which I have employed the foregoing treatment the effect was remarkably good, and in but one case have I had to repeat the injection of veratrum. The convulsions cease, the muscles relax, the pulse becomes slower, the temperature falls, and the skin becomes moist. Indeed the danger is over in less time than by any other means I have seen employed. Appropriate after-treatment, as may be indicated, should, of course, be adopted.—*Med. News.*

HYGIENE.

AN ANALYSIS OF THE STATISTICS OF FORTY-ONE THOUSAND, FIVE HUNDRED CASES OF EPIDEMIC INFLUENZA.

Dr. Benjamin Lee, in *The Journal of the American Medical Association*, March 14th, 1891, summarizes the replies of 265 physicians to inquiries made, having a practical bearing on the grippe epidemic of last year, and furnishes some valuable statistics:

People appeared to look forward to the appearance of *la grippe* on this side the ocean as an experience, which, on the whole, would constitute a mild amusement, rather than an occasion of suffering, distress, terror and death. A very few weeks, however, sufficed to convince both the public and the profession that influenza meant a good deal more than a bad cold in the head.

Discovering this fact, and observing the serious involvement of the nervous system in a large percentage of the cases, the inquiry suggested itself to those who were looking for nothing more than a bronchial catarrh, "Is this influenza after all, or is it some other epidemic disease, and if some other, is it not dengue?"

The first point of distinction that we may make is in regard to the mode of extension of the two affections. Influenza, as we have had recent demonstration, spreads like a flood, inundating whole sections in an hour, while dengue works along gradually, establishing centres of infection here and there, enabling its course to be easily traced. In their sudden onset, intense headache, pain in the back and limbs, and excessive lassitude they have much in common, but, while the fever in dengue is invariably of a high grade, in influenza it is often slight or ab-

sent altogether. The catarrhal and pneumonitic complications of influenza, the dyspnœa, the feeble piping voice, are very rare in dengue, while on the other hand, the latter is characterized by violent and persistent gastric disturbances.

An erythematous eruption followed by desquamation, beginning in the face and descending, is rarely absent in dengue, and as rarely seen in influenza. Dengue very rarely terminates fatally, influenza, as we know to our cost, often does. While, therefore, there are points of similarity between the two affections, especially in regard to their nervous pnenomena, the distinctions are sufficiently marked to prevent any misconception, when large numbers of cases are under consideration.

It is probable that not a single individual entirely escaped its pernicious effects. Its manifestations were so various, affecting in one the bronchial tubes, in another the nervous system, now the brain and now the bowels, here peritonitis and there pneumonia, that it was a long time, comparatively, before physicians, even, recognized it in its protean forms. It is scarcely conceivable that a disease which spreads with such astonishing rapidity, goes through the process of re-development in each person infected, and is only communicated from person to person or by infected articles. And yet this theory has been maintained by a few authorities who claim that it is always more prevalent along lines of travel, and that it did not progress more rapidly than modern means of communication would enable it to do.

The following is an analysis of the results obtained:

Number of physicians reporting, . .	265
Number of cases, ...	37,275
Adults, ...	26,302
Children, ...	10,973
Number of cases nervous, ...	6,913
Number of cases catarrhal, ...	16,434
Number of cases inflammatory, . .	5,829
No. of deaths directly caused, 56 / No. of deaths indirectly caused, 205	261
Immediate cause of death, bronchitis,	8
" " " pneumonia,	117
" " " phthisis, .	42
" " " nervous, .	21

Supposing, which there is no reason to doubt, that the 265 physicians who replied, represent a fair average of the practitioners of the State, this would give us 1,120,000 persons as having been sufficiently ill with the disease to demand medical aid or come beneath the observation of a medical man, and 7,879 deaths directly or indirectly caused by the epidemic influence in the State of Pennsylvania alone. We know that there were many who suffered mild attacks who never sought advice, and many more whom physicians, in their excessive haste, failed to enter on their visiting lists although they may have prescribed for them.

In fact this is exactly the return that was made in some instances:

"Treated an immense number of cases but kept no record."

Nearly one-half of the cases reported were in the city of Philadelphia. As the Philadelphia physicians reporting constituted only about one-third of the whole number, the disease must therefore have been more prevalent in large cities than in the country. To be exact, the average of cases to each physician reporting was 140; while the average to each Philadelphia physician reporting, was 193.

The disease seems to have been especially prevalent in mining towns. Two physicians in Shamokin, a place of about 12,000 inhabitants, report 950 cases between them. In Greensburg, a place of about 6,000 inhabitants, two physicians report 737 cases. In the little village of Portage, Cambria County, numbering 650 inhabitants, one physician reports 400 cases. Ill-fated Plymouth suffered seriously as did the most of the other mining towns and villages of Luzerne County. Scranton was also severely visited.

One curious fact developed by the investigation is that the disease was observed quite as early in the extreme western portion of the State as in Philadelphia on the eastern border. Indeed, more observers in proportion to the population report having observed cases in November in Allegheny County than in Philadelphia County: as though a disease-bearing air current had passed over the eastern border at a great altitude and dipped down in the western portion of the State.

Of the 265 physicians reporting 206 made the distinction as to the predominant type of the disease. While it is to be regretted that all did not, still this number, representing more than 29,000 cases, is ample for purposes of deduction.

Nearly 7,000 of these are recorded as belonging to the nervous type. This is very nearly 25 per cent. and does not, of course, preclude the presence of nervous symptoms in a large proportion of those set down as catarrhal or inflammatory. And this takes us back to the point from which we started, namely the marked predominance of the

nervous element and the protean character of the manifestations in this singular affection. How shall we account for the production of such varied morbid phenomena by a single morbific agent?

To the writer, the most probable explanation is, that the morbific influence, whether germ, microbe or occult meteorological departure from the normal condition, spent itself directly upon the nervous system, and more particularly on the vegetative portion of that system, or to particularize, still further upon the pneumogastric nerve and its associated ganglia with partial implication of the spinal cord. Nearly all phenomena which distinguish influenza from other similar affections can be readily accounted for by this theory; the excessive nervous prostration, so entirely out of proportion to the catarrhal disturbance, the emotional depression, causing the victim to weep incessantly without consciousness of any reason for so doing, the sense of constriction about the larynx, the strident cough, piping voice and occasional aphonia, the sudden congestions of the lungs, the pain and stiffness in the dorsal muscles, especially along the nucha, the gastric and intestinal disturbances, the intense headache, and transient manias, all can be accounted for by the supposition that the great balance wheel of organic life has become deranged—and on no other theory so simply.

The fact that all the remedies which were found most beneficial in the treatment of this affection are nervines, such as phenacetine, morphia and nux vomica may also be adduced as strongly confirmatory of this theory.

MODE OF ENTRY OF THE TUBERCULAR POISON INTO THE BODY.

Dr. Bollinger believes that the frequency of infection through the skin has been underestimated. Several cases have been recorded of direct inoculation by wounds received from broken spittoons, by bites, operations, earrings, etc. Eczema and impetigo increase the susceptibility of the skin. No case has as yet been attributed to vaccination, and it would appear that the tubercle bacilli are unable to live in the vaccine lymph. They also appear unable to pierce the pores of the skin as do some of the pyogenic organisms. The susceptibility of the mucous membranes is increased by inflammatory processes, such as otitis, rhinitis, conjunctivitis, and pharyngitis. The poison travels to the submaxillary glands and those of the neck, and generally causes local tuberculosis of the glands. The chief point of infection is of course the lungs. Local predisposition is best exhibited by apices which have been before diseased, but have undergone a healing process. The movement is deficient both in expiration and inspiration, and the liability to reinfection is increased by anæmia, irritants, constitutional influences, such as diabetes, disturbances of digestion, and unhealthy surroundings generally. The poison may pass through the lungs and attack the bronchial glands, under which circumstances the disease may be very insidious. The predisposition of the lungs again exhibits itself in metastasis; not every tubercular disease of these organs is due to inhalation of the bacilli or their spores. As regards primary tuberculosis of the testicles, joints, and bones, Bollinger considers that a latent hæmatogenic infection must be understood, which leaves as little trace of its point of entry as does a primary septic endocarditis or an osteomyelitis. Tubercular disease of the larynx depends upon an auto-infection through the sputum. The rarity of this disease in children is explained by the infrequency of pulmonary cavities in the rapid forms of phthisis. Primary tuberculosis of the intestine generally, combined with an affection of the mesenteric and retroperitoneal glands, is usually occasioned by means of vitiated food and contaminated feeding utensils. Secondary tuberculosis of the intestine depends upon an auto-infection. The tubercular poison passes through to the intestine unaltered by the juices of the stomach and attacks the Peyer's patches and solitary follicles. Tuberculosis of the peritoneum, which is three or four times as common in men as in women, can arise directly from ulcers of the intestines, from tubercular abdominal glands, or, especially in women, from the urogenital tract; further, through contagion from the lungs and pleura, and finally in the course of miliary tuberculosis, or from caseus bronchial glands. Primary tuberculosis of the peritoneum is quite rare. As regards the infection from milk, this is, in Bollinger's opinion, undoubtedly due to the udder of the cow being affected with the disease. Infection through the milk of tuberculous women has not yet been proved. *Münchener Medizinische Wochenschrift.*

REGULATION OF PROSTITUTION.

Moeller in the *Journal des Maladies Cutanées*, December, 1890, makes the asser-

tion that the measures adopted in the regulation of prostitution are inefficient from a hygienic point of view. While admitting that the danger of contagion is greatest during the primary stage of syphilis, and slightly less during the secondary period when the external manifestations of the disease are present, he claims that during the entire secondary period the person infected is able to transmit the disease, even when there are no external manifestations, as has been proved by the infection of nurses from infants and *vice versa*, and by the infection of women during intercourse. This contagiousness of syphilis during the latent stage of the secondary period, is but little marked if the body of the infected person does not present any external solution of continuity; but the slightest scratch or laceration of the skin or mucous membrane considerably increases the danger of contagion. For this reason Moeller claims that persons afflicted with syphilis should abstain from sexual intercourse not only during the existence of the primary sore, or when the secondary manifestations are present, but in the latent period as well. This is the duty of every man or woman affected with syphilis, to neglect which is culpable. He goes on to say that our present regulations are based upon the assumptions of physicians at the beginning of this century, who believed that gonorrhœa, soft chancre, and syphilis, were all of the same nature, and only contagious in the initial stages. The researches of the succeeding years have entirely revolutionized these views, hence the necessity of altering the laws governing prostitution to meet the dangers which have been discovered.

As a substitute for the present laws upon the subject he suggests a system as follows: Every person who is convicted of certain offenses relative to prostitution, or who has committed some infraction of the articles of the penal code, should be, if he be sentenced to imprisonment, submitted to a physical examination at the moment of arrest. This examination should be repeated at the expiration of punishment. If the physician confirms the presence of syphilitic lesions, the patients should be admitted into a hospital for treatment. In addition, they should be forbidden to resume their trade, and instructed not to indulge in sexual intercourse as long as the dangers of contagion exist. They should likewise be obliged to submit to periodical visits during a variable time, to be determined at the beginning of the sickness. The advantage which Moeller claims for this system is, in the first place, the suppression of the registration of prostitutes; second, in place of leaving to hazard or to arbitrary attention the designating of the prostitutes who should be submitted to sanitary visits, it is the prostitutes who, by the infractions they have committed, would designate themselves, in virtue of a positive law which they know and which they ought to recognize. Moreover, the civil authorities would no longer recognize the right of the infected prostitutes to continue their business, and would interdict them from the practice of their profession, so long as they could be dangerous to the public health. Thus would disappear that security which the public accords, rightly or wrongly, to the registered prostitutes, who are considered as healthy in virtue of the certificate delivered after the inspector's visit. Finally, the prophylactic system thus designed would neither violate individual liberty nor the moral law.

MEDICAL CHEMISTRY.

CHEMICAL REACTIONS OF KOCH'S TUBERCULIN.

In the *Farmatzevtitchesky Jürnal*, No. 9, 1891, p. 136, Mr. I. Gertel, a chemist, publishes the result of his examination of a specimen of Koch's "tuberculin." The "lymph" forms a cinnamon-brown, odorless, viscid fluid, sp. gravity of 1.17 and of a neutral reaction. Concentrated sulphuric acid dissolves it easily and completely, the solution being at first colorless, but after a while assuming a cinnamon-brown color. Concentrated hydrochloric acid does not manifest any action on the lymph, while concentrated nitric acid produces a slight opacity, appearing at the point of contact between the two fluids. When immersed in a sulphuric acid solution of tuberculin, crystals of bichromate of potassium soon become covered with bubbles (which are due to glycerine being present in the preparation). The following reagents give considerable precipitates on being added to a 10 per cent. aqueous solution of tuberculin: Tannic acid, picric acid, chloride of gold, nitrate of silver, sulphate of copper, nitrate of mercuric suboxide; but chloride of platinum, neutral acetate of lead, and chloride of tin, produce a comparatively slight precipitation; iodide of potassium and cadimum (double salt) give a distinct turbidity, but no actual deposit. The following substances behave entirely negatively toward the solution: Iodide of potassium

and mercury (double salt), bi-iodide of potassium, chloride of iron, ferro-cyanide of potassium, chloride of mercury, molibdenate of ammonia, rhodanide of potassium, chromate of potassium, ammonia, and sulphate of iron. When heated with acids, the aqueous solution assumes an intense yellow color. Strongly diluted aqueous solutions give voluminous precipitates with alcohol, the deposits being re-dissolved on a free addition of water. A 10 per cent. aqueous solution, as well as more diluted ones, when kept at the ordinary room temperature, becomes turbid even on the next day. As to the lymph itself (that is, an undiluted preparation), it has not undergone any changes even after 4 months' keeping.

THE DA COSTA LABORATORY OF BIOLOGY.

It is announced that the trustees of Columbia College have determined to devote the late Mr. Charles M. Da Costa's bequest of $100,000 to the foundation endowment of a laboratory of biology, to be built on the grounds of the medical school (the College of Physicians and Surgeons), and that the professor in charge of the department is to be designated the Da Costa professor of biology. This is an early and striking manifestation of the good likely to result from the union of the College of Physicians and Surgeons with Columbia College.

THE PHONOGRAPH OF MEDICINE.

The applicability of the phonograph to the record and demonstration of defects in speech has been well illustrated during the past week at the Royal Medical and Chirurgical Society and at the Hunterian Society. At the first named, Dr. Hale White and Mr. Golding-Bird were enabled by means of this instrument to allow the Fellows present to hear the curiously defective speech of two children, and to contrast this with the improvement effected by treatment, for the subjects were present, and after the phonograph had given their past utterances, their present speech was demonstrated *viva voce*. The papers read by the above gentlemen and that by Dr. F. Taylor led to an instructive debate, which was further illustrated by some marked cases introduced by Dr. Hadden. The outcome seemed to be that these defects in articulation are probably of central origin, and not due to any mechanical interference with the organs of speech. Whether, as suggested by Dr. Langdon Down and Mr. Spencer Watson's the defect was primarily one of audition it is a question certainly worthy of consideration. Another point raised was whether the defect should be considered one of speech or language, and some exception was taken by Dr. Taylor, Dr. Pye-Smith, and others, to the use of the term "idioglossia," which, however, was ably defended by Dr. Hale White. The other phonographic demonstration at the Hunterian Society was by Dr. Hughlings Jackson, who thus reproduced the characteristic speech of a subject of cerebro-spinal sclerosis. There can be little question that the phonograph will ultimately prove very useful, especially in the preservation of certain anomalies of articulation, and its further extension to other sound phenomena in the range of clinical medicine may be justifiably hoped for.—*Lancet.*

NEWS AND MISCELLANY.

We are authorized to state that Dr. J. M. DaCosta is not going to Europe this year as reported.

Dr. J. M. Baldy has been elected Professor of Gynæcology in the Philadelphia Polyclinic and College for Graduates in Medicine.

The twenty-sixth annual meeting of the members of the Michigan State Medical Society, will be held in Saginaw, Thursday and Friday, June 11th and 12th, 1891, at Germania Hall, a building so situated as to be readily reached from all principal hotels by electric cars, and sufficiently commodious to accommodate the work of the General Sessions, the Committees and all of the Sections.

The President's Annual Address will be given by Dr. L. W. Bliss, Saginaw; subject to be announced later.

The Address of the Orator appointed by the Section on the Practice of Medicine, will be delivered by Dr. Heneage Gibbes, Ann Arbor, subject, "Phthisis."

The Orator appointed by the Section on Obstetrics and Gynæcology, is Dr. J. H. Kellogg, Battle Creek, and the subject of his address will be: "The Influence of Dress in Producing the Physical Decadence of American Women." This address will be appropriately illustrated by stereopticon views.

Dr. H. O. Walker, Detroit, will give the address on Surgery; subject to be announced later.

The Medical Society of the State of North Carolina, will meet at Asheville, May 26th, 27th and 28th, 1891.

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Clinical Lecture.

LEG ULCER—SKIN GRAFTING—KELOID—LUPUS—DIFFERENTIAL DIAGNOSIS OF LUPUS AND EPITHELIOMA—SCROFULOUS ULCERATION OF THE CERVICAL GLANDS—TRAUMATIC INFECTION—ANTISEPTIC POULTICE.

BY ERNEST LAPLACE, M. D.,

PROFESSOR OF PATHOLGOY AND CLINICAL SURGERY, MEDICO-CHIRURGICAL COLLEGE, PHILADELPHIA; SURGEON TO THE PHILADELPHIA HOSPITAL.

LEG ULCER.

Gentlemen:—The first case that I bring before you to-day is one that was operated upon by me eighteen days ago, and affords an excellent example of the successful results obtainable by the modern surgical method followed in the treatment of these cases.

A leg ulcer is a necrosis of the epithelium and underlying tissues. The surrounding parts are indurated and inflamed, and the edges of the ulcer are hard and callous. Of itself, a leg ulcer will not heal, but continues to increasei n size, until it frequently reaches entirely around the limb.

The treatment to be followed is, therefore, to cover this denuded and ulcerated surface with new skin; but before attempting this, we must prepare the surface of the wound for its reception. So the first step is to scrape away the necrosed epithelium and remove the callous edges. This must be thoroughly done, and it matters not if the operator goes right down to the muscle, or at all events until healthy and living tissue is reached. Then leave the wound until healthy granulations have begun to form, and you have a surface ready for your skin graft. Even this preliminary operation should be conducted with strictest aseptic precautions.

SKIN GRAFTING.

Let us turn aside from this patient for a moment to review the question of skin grafting. The process is a comparatively new one in surgery, dating only a few years back; but when skin grafting was first successfully performed, it was thought that only minute grafts could be transplanted. Accordingly, it was then the practice to snip off a tiny piece of skin, no larger than a pin's head, and to cover the denuded parts with a number of these. Such little grafts would form islands of epithelium which gradually increased in size, and joined one another, until finally the whole surface was covered. It was argued, however, that if a small graft would take root and grow, a large one should do the same, all things being equal. The total immunity from suppuration afforded by modern aseptic surgery, has enabled us to prove that this is truly the case. We no longer transplant minute fragments of skin, but take strips, or pieces, large enough to cover the entire denuded surface at the outset. This is what has been done in the case before you.

Let us first examine the spot from whence I took the skin. You see that it is entirely healed, and covered with new epithelium, although a large amount was removed. A valuable lesson may be learned from this. In no case should we hesitate to take from a healthy surface all the epithelium we need, for if we proceed aseptically, new epithelium is rapidly formed, and the healing is perfect. You will notice that the new skin covering is redder than the surrounding skin; this is because, first, it is thinner, and second, because the blood vessels lie nearer the surface. Ultimately, however, this new skin will become thicker than that of the surrounding parts, owing to the friction and irritation caused by the clothing, and a similar process of epithelial thickening will take place as that which occurs on the hands of rowers, where friction primarily wears away the skin, but where finally additional epithelial cells are thrown off until the part becomes materially thickened. Eventually, this reddened skin, now tender and thin, will, therefore, become thick, and also of a

darker color than the surrounding parts.

We will now turn our attention to what eighteen days ago was a very ugly looking indolent ulcer. You see that its surface is entirely covered with exceedingly delicate epithelium, so thin indeed as to be transparent, enabling us to see the underlying granulations. The operation has been a success, and nothing further remains to be done than to keep the part protected with an antiseptic dressing, and to keep the man in bed until this new epithelium has become thick and strong.

Right here let me warn you against a needless fear, often experienced by the young surgeon in similar cases. When, a week after having made the graft, you remove the dressing, you will find a large slough of dead epithelium come away with it, and you will very naturally conclude that the graft has not taken and that your operation has been a failure. Not so, however, for below the dead epithelium you will see the thin and transparent membrane which we have here. This is easily explained. In grafting we can only expect epithelium that is alive and well nourished to grow upon the denuded surface. Let me remind you of the anatomy of the skin. The uppermost layer, the horny epithelium, is dead, and comes off in washing as dandruff; below this are epithelial cells also poorly nourished; below these are the papillæ with their blood vessels and surrounded by living epithelial cells; and, finally, below all these is the fibrous tissue. In taking our graft we cut through these papillæ. We know this because we have distinct hemorrhage. This living and well-nourished epithelium we graft on our denuded surface where it grows and new epithelial cells quickly form from around the papillæ and push up the layers of unnourished cells, so that when the dressing is removed it would seem as though the whole graft had come away, while in reality the living epithelium has taken root.

KELOID.

The next patient which I will call your attention to this morning, is also one that was operated upon about two weeks ago, and is another example of successful skin grafting.

A keloid is, as you know, a dense cicatricial formation, which causes considerable contraction. This man came to the hospital with a dense growth on the ball of the thumb, which contracted that member into the hand. The growth was primarily removed, and a week allowed for healthy granulations to form over the denuded muscles, for both the adductor and flexor pollicis were laid bare. We then grafted, covering the entire surface with new epithelium, and with the gratifying results which you now see. The man's thumb is in a normal position. To be sure, we had far greater chance for success than in the case of leg ulcer, for there we were dealing with necrosed and diseased tissues, while here the parts were healthy and well nourished.

Look at the man's fingers. You will remember that these also were greatly contracted but are now nearly straight. It is the tendency of these contractions to increase, as additional deposits of cicatrical tissue are formed about the tendon, until finally a useless hand is the result.

What was done in this case, was to cut down upon the tendons, and nearly through them, severing fully three-fourths of their substance. The remaining fibres acting as a suture to keep the ends in apposition. The fingers were then stretched until straight, and put on splints. The stretched tendons gradually became strengthened and the gaping cuts in them healed up, the fingers remaining straight.

LUPUS.

The next patient is a man suffering from lupus who has been treated with Koch's lymph. One milligramme of the lymph was injected on Monday, two milligrammes on Tuesday, and three on Wednesday—none since (Saturday). The improvement has been very marked, and healing has already begun to take place.

I am not prepared to make any definite statement regarding the value of Koch's lymph, but am free to acknowledge that its action upon local tuberculous processes—and lupus is one of these—is undeniable. What will be the result of this treatment I cannot now say. The man may make a complete recovery, as I have seen many such follow the use of Koch's lymph; the disease may, however, return after a time. Time alone will decide the case.

The principal reason for my bringing this case before you was in order to demonstrate differential diagnosis between it and a case of epithelioma.

DIFFERENT DIAGNOSIS OF LUPUS AND EPITHELIOMA.

Let us first study their similarity. Both have ulcerating surfaces, and in both the skin slopes down toward the ulcer, and their general appearance is not at all unlike. You will notice, however, that the surrounding

skin, in the case of epithelioma, is indurated and hardened, while in the case of lupus the skin is freely movable over the surface of the granulations. Often, indeed, a narrow bridge of skin will stretch across the ulcerating surface. This feature is peculiar to tuberculous ulcerations. In tuberculous processes also, the granulations extend under the skin, while in epithelioma the skin is destroyed as far as the ulceration reaches.

Under the microscope the difference is still more marked. In the granulations taken from a case of lupus we find round cells with a nucleus, these are tubercular cells. Often also we find much larger cells, containing three or more nuclei, these are known as the giant cells of tuberculosis. Their existence is due to the fact that the formation of the nuclei occurs more rapidly than the segmentation of the surrounding protoplasm.

In epithelioma the microscope shows a totally different picture. Before us lie myriads of epithelial cells of all shapes and forms.

The most definite and perhaps practical means for the differential diagnosis of lupus and epithelioma is afforded us by Koch's lymph. For it invariably causes a re-action in all cases of local tuberculosis, while it has absolutely no effect in cases of epithelioma. This fact alone is sufficient to make for Koch's discovery a permanent place in medicine.

SCROFULOUS ULCERATION OF CERVICAL GLANDS.

The child that lies before you presents another, and a typical form of local tuberculosis. It is a very ill child, and its condition demands immediate attention. In the neck, over the region of the cervical lymphatic glands, is a large dense tumor—very large for a child who has not seen more than two summers. Near the angle of the jaw the growth has ulcerated, and a cheesy matter is discharged from the opening. We see, also, that the opening is bridged by a narrow strip of skin, and this fact gives us an immediate clue to the diagnosis, as you remember I referred to this peculiarity as being typical to tuberculous ulcerations. We find that the mass is slightly movable and from its appearance and location, are forced to the conclusion that the growth is a scrofulous ulceration of the cervical glands. This conclusion is strengthened by an examination of the patient's temperature chart, which shows a very high evening temperature. The case, therefore, demands the immediate removal of these glands, and were it not for the fact that the parents' consent to the operation has not yet been obtained, I would perform it to-day, but will be forced to delay it. In the mean time every effort will be made to improve the child's physical condition, so that it will be better able to stand the operation.

It is in these fair-skinned, blue-eyed children that we generally find scrofula. In all probability in this case other glands are also affected.

TRAUMATIC INFECTION.

The last patient which I shall have the pleasure of showing you to-day, is this man who came to us, not long ago, to be treated for a very painful tumor over the glands in the neck. The growth is not clearly defined, but of irregular shape and very painful; the surrounding skin is also inflamed and painful. We evidently have an acute inflammatory process here and must look further for the cause. We find that a short time previously he had received a contused and lacerated wound of the scalp by being struck with a rock, but to which he had paid little attention.

All wounds if improperly dressed or treated are liable to infection, but contused and lacerated wounds, where a large amount of tissue is destroyed, are peculiarly so disposed, the wide-open mouths of the lymphatics being always ready to imbibe the poisonous germs.

Let me here tell you that nine-tenths of all acute inflammatory processes are caused by the pus microbe, the *streptococcus pyogenes aureus*, and it is an infection from this source that we have before us.

Never, gentlemen, never be tempted or led to apply a hot poultice to such an inflammatory process. What could be more conducive to the propagation of these poisonous germs than the application of heat and moisture! What season of the year so fruitful of infectious diseases as the hot and wet months of summer? To apply a hot poultice to such an inflammation is to court further infection, when the real object in view is to retard it. What is demanded is, first, an opening up and cleansing of the wound, which has been the door to the infection, and the removal from it of any infectious matter; it should then be dressed aseptically. Next, local applications to the point of infection, of such a nature as will check the suppurative process and cause the death of the microbe. For this purpose antiseptic solutions are alone available. *Wet*, if you like, gentlemen, but never *hot*.

ANTISEPTIC POULTICE.

Take a solution of 1 : 3000 of corrosive sublimate, or better still, an acid solution of 1 : 3000 of the same, as it is stronger, and make a cold poultice with linseed meal, for the meal will hold the moisture better and longer than any cloth, and apply this over the seat of inflammation, and the suppurative process will soon cease, and the pain and swelling disappear.

The modern poultice is an antiseptic poultice.

This is the bent of modern surgery, the prevention of infection, and the maintenance of aseptic cleanliness. By these means we may cope with ulcerations on the surface, and check the process of inflammation even when hidden deep in the tissues. These are lessons worthy of your careful consideration and earnest study.

ACUTE PARENCHYMATOUS NEPHRITIS, WITH ACTIVE PULMONARY CONGESTION.

BY PROF. CHAS. G. STOCKTON.

BUFFALO GENERAL HOSPITAL.

Gentlemen :—The history of this patient is as follows : Aged 42, married, Canadian, carpenter. Family history negative. The patient had measles and scarlet fever when a child, apart from this he has always been well and he denies any venereal trouble. On Wednesday, a week ago to-day, while at work, he was taken suddenly with a severe chill, followed by fever and nausea, but he has vomited only two or three times. The attacks were also attended by considerable headache, which has continued with intermissions up to the present. He stopped work, went home and to bed, and he has been in bed most of the time since. He has no appetite and the nausea has continued. Since Thursday he has had griping pain in the abdomen, and diarrhœa existed from Thursday until Monday. On Sunday he had a second chill. The patient is a moderate drinker and he smokes to excess. On entering the hospital his pulse was 98, temperature 103.4°, respirations 38.

The patient, as you look at him, will impress you at once by his appearance of apathy. The man is evidently very sick, very feeble, and somewhat cyanosed. His breathing is between 40 and 50 a minute, his pulse has varied between 100 and 110, and his temperature between 103.5° and 104.5° since his admission. With these symptoms and from the man's appearance, we would say that there was something wrong with his respiratory apparatus, and, to follow the symptoms up more carefully, we find that he has a moderate cough and considerable expectoration of muco-purulent matter which is very tenacious, and which sticks to the bottom of the cup and looks like the expectoration of catarrhal pneumonia. In all probability the prostration and apathy depend either upon the severity of the fever, or upon some toxæmia, or the two combined. The toxæmia may arise from his lung trouble or from some other condition.

The tongue, which he protrudes slowly, is dry, brown and cracked. He says his hearing is good, but you observe that he understands slowly, giving one the impression, at first, that he is deaf. The condition of the tongue and the slow cerebration are evidences of a toxæmia.

As we inspect his breathing, we find it rather shallow, but symmetrical. He breathes as though his lungs were not properly filled with air and as though the bases were particularly involved. This condition might come about from inflammation of the lung and the exudation of fluid into the substance of the lung, from effusion around the lung, or merely from congestion of the lung. I find everywhere, anteriorly, a feeble respiratory murmur, with harsh sounds and some so-called dry râles in the upper part, some moist râles and a few sibilant sounds lower down. The vesicular respiration is harsh, superficial and very imperfect. The same condition is found behind, the breathing is particularly obscure and impure at the bases. The breathing behind is accompanied by more sounds of disease, such as râles and sibilant breathing, than in front. I regard the evidences, so far as the lungs are concerned, both from the history of the case and the physical examination, to be in favor of congestion of a high degree with a certain amount of inflammatory trouble in the bronchial tubes, the amount of actual inflammation being much less than we would expect to find with the rapid breathing, high temperature, frequent pulse and the general prostration of the patient. I do not find enough trouble in the chest to account for the general condition and that was what impressed the house-staff when they first saw the man.

While the pulse is somewhat ample, it is very feeble, and still it has more resistance

and greater tension than we would expect in typhoid fever with this temperature. On examining the abdomen to make sure that we are right in excluding typhoid fever, we find it slightly distended with gas. The skin looks normal, there is no eruption, and pressure over the abdomen discovers no points of especial tenderness. There is little evidence of abdominal trouble and the bowels have moved regularly since the diarrhœa. Last night he was given epsom salts and, as a result, he had three or four large involuntary stools, not typhoidal, but of a light yellow color and with a distinct odor of urine. He has passed three pints and a half of urine in the last twenty-four hours. Two days ago there was a very slight discharge of condensed urine, yellowish red, very acid, containing a large amount of albumen. The sediment contained a large quantity of débris, renal epithelium in abundance, and granular blood and epithelial casts. The blood casts were conspicuous by their abundance. There were no fatty nor hyaline casts.

Now let us look at the case from the standpoint of the information derived from the examination of the urine. Here is a man apparently in good health, suddenly seized with chill, fever, prostration, vomiting; who has been confined to bed for a week, at the end of which time we find him still very much prostrated, with a frequent feeble pulse, high temperature and brown cracked tongue, with scanty urine, and with evidence of lung trouble. Which of these two conditions: the nephritis or the congestion of the lungs, was primary? It is not common for an acute lung trouble to cause an acute nephritis, but it is quite common to have congestion of the lungs and a certain amount of disturbance of respiration with acute nephritis. The evidence points, therefore, toward the conclusion that this man was seized with an acute nephritis at the time of the initial chill.

If we had not examined the urine we should say that the man was seized with an acute lobular pneumonia, and from the high temperature and prostration we would make a grave prognosis; but knowing the condition of the urine and having an explanation of these symptoms of prostration, the prognosis becomes better though still guarded. From the examination of the urine we would conclude that this is a case not of chronic but acute Bright's disease, from which recovery is to be expected. The lung trouble is somewhat secondary to the kidney lesion. I say "somewhat secondary" because at the same time that he caught cold and the nephritis started, the lungs might have become involved. But the blood going to the lungs is loaded with excrementitious products which have irritated the pulmonary tissue, and the condition of the circulation is depressed and the pulse frequent. This case would probably result fatally from the condition in the lungs being maintained by the disease in the kidneys if the latter organs were not properly attended to.

The cause of this attack we do not know satisfactorily. There is no history of falling into cold water or other marked exposure. The measles and scarlet fever occurred too long ago to have any causal relation. They might have been followed by a nephritis which has become chronic and has been lighted up into an acute exacerbation, but the condition of the urine as reported to me does not indicate the existence of such a condition. The heart is apparently sound, though excited in its action, there is no evidence of previous cardiac valvular lesion nor of acute endo-carditis. Although we cannot account definitely for this nephritis, we must remember that it is not uncommon to have an acute Bright's disease coming on without any special exposure, just as on the other hand, exposure to wet and cold is not always followed by this trouble.

It is important that a case like this shall receive early treatment. I directed that the patient's back be thoroughly cupped, that his feet be bathed in hot water, and, that he have hot vapor baths. As a result of the treatment the sweating was induced and the amount of urine passed increased very largely. In proportion as the elimination by the kidneys increases his symptoms will subside. He was also cupped over the lungs and the essential oil of camphor was used as a stimulant application. I did not use turpentine because it is a stimulant to the kidney and a kidney already overstimulated by inflammation should not be exposed to the danger of further irritation. The treatment was directed principally to the skin, both to aid elimination by exciting sweating and to relieve the kidneys of their engorgement by bringing the blood to the surface. Magnesium sulphate was also given to carry off the poison by the bowels and to relieve the circulation by depletion. A light diet was ordered, the nervous symptoms were controlled by bromide of potassium, assisted by moderate doses of chloral. Internal medication directed to the kidneys is to be avoided in such a case as this, although it would be perfectly safe to give potassium acetate or

sodium benzoate, which are un-irritating diuretics. The former is especially indicated when the urine is highly acid, the latter usually increases the acidity of the urine, but it may often be given with benefit even in cases of acid urine. Potassium acetate should be given in doses of fifteen grains once in two hours with infusion of digitalis. Sodium benzoate is given in five grain doses every two hours with or without the digitalis. Digitalis is given with a view to increasing the pressure of blood in the kidney.

This is the only medication which I think should be directed toward the kidneys themselves when they are acutely inflamed or acutely irritated. The purgatives act indirectly on the kidneys in the most favorable way possible, lessening their labor of excretion and removing the effete products which would otherwise accumulate in the blood. The necessity of examining the urine, especially in cases like this of congestion of the lungs, is the most important lesson to be learned from this case.

CLINIC THREE DAYS LATER.

These are specimens taken from the patient whom you saw on Wednesday. His urine was increased in quantity and the condition of his kidneys improved until they were functionally fairly well, but, contrary to my expectations, the man did not improve under the treatment that should have unloaded the venous side of his circulation, he grew weaker, suffered more and more from dyspnœa, and finally died by failure of respiration.

The post-mortem revealed, as the physical examination two days before had promised, a very acute congestion of the lungs. The right lung showed rather more infiltration than could be classed under the head of congestion, there was very complete œdema, particularly of the lower lobe. The upper portion of the right lung and the left lung were markedly congested. The lung now crepitates very feebly and is still dark in color, though it has bleached out somewhat since the autopsy.

The examination further revealed that the kidneys, instead of being healthy previously to this acute attack, as I supposed from the history of the case and the report of the urine analysis, had been for a long time diseased, the man having the so-called large white kidney—the chronic parenchymatous form of diffuse nephritis. There was an acute attack which was superadded to the chronic kidney trouble. These kidneys did not appear red and congested as other organs of the body did, and you see now how pale they look. But if you examine them carefully, you will find injected points lying among large masses of comparatively white tissue. These are not the red engorged kidneys which I expected to find. Does this mean that the man did not have the acute inflammation which I described to you? Not at all, it means that the kidneys were congested like the other organs of the body, but they were pale because their tissues had become so changed by chronic disease, which I did not suspect because the report of the urine analysis misled me—that the areas remaining for blood to enter were small. These kidneys were red and congested for such kidneys, but yet they contained far less blood than is normal. It is precisely what we expected to find, but occurring in the midst of another change.

The heart was somewhat enlarged but there was no valvular lesion. On account of the swollen condition of the lungs, this enlargement was not manifest at the physical examination. Although the predominating inflammation in the kidney was parenchymatous, yet there was some fibroid change which would cause resistance to the onward flow of the blood and thus produce hypertrophy of the heart. There were a few atheromatous markings just above the cusps of the aortic valves.

The spleen and liver were congested. The stomach was large but empty, and held nine pints of water. The great majority of cases of dilatation of the stomach, occur in those who have no stenosis in the alimentary canal, and there was no stenosis here. Stenosis below the stomach, however is quite apt to be a mechanical cause of such a dilatation.

COMMUNICATIONS.

CANCER OF THE RECTUM.[1]

BY L. L. McARTHUR, M. D.
CHICAGO, ILL.

In my brief experience as a surgeon it has been my fortune to number among my cases six examples of this disease in various stages of advancement, as follows: one, female, cancer within two inches of anus, colostomy and excision; one, female, cancer involving anus and lower rectum, colostomy, excision; one, female, cancer involving

[1] Read before the Chicago Gynecological Society, January 16th, 1891.

anus and rectum, colostomy, no excision; one, female, cancer high in rectum, no colostomy, curettage; one, male, Kraske's operation, colostomy (Dr. Fenger's case); one, male, no excision, curettage, no colostomy. With these there were no deaths as a result of the operations, though Kelsey states that the mortality for excision is thirty-three per cent.

Let me, before presenting the history of a case, call your attention to the following significant facts: In a careful inquiry—made by Cripps—into the family history of a large number of cases of cancer, the percentage of mortality by that disease was found almost identical with that of the general population by the same. In a very large proportion the disease is so situated that an infection could have been plausibly possible. Infection of husband from wife suffering from cancer of cervix has been in several instances well authenticated by competent observers. A much greater frequency exists near the sea than inland, and both Sheurlen, of Munich, and Thoma, of Heidelberg, have demonstrated the frequent presence of micro-organisms (psorosperms), which, in their opinion have a specific relation to the causation of this disease.

In relative frequency of type, cylindrical-celled, flat-celled (epithelioma), and papillo-carcinoma stand in the order named. Allingham, who, in 1886, had already reported thirty-nine cases of excision, is authority for the statement that rectal carcinoma usually runs its course in twenty-four months. He notes, however, cases ending in death in from four months to four years. His experience had been also (contrary to that usually noted) that the disease occurs more frequently in males than in females, and that its most usual site is within three inches of the anus. Cachexia appears at a very early period. The ages of greatest frequency range from 45 to 55, though it has been noted as early as the age of 6. Cancer in this location frequently escapes the observation of the general practitioner, being mistaken for hemorrhoids; and, for this reason, too great care cannot be taken in the examination of middle-aged people in whom there are symptoms referable to the rectum.

Treatment.—James Adams urges that in every case there should be made a colostomy, saying: "In cases of any but the slightest degree the operation of removal may prove incomplete and the disease speedily return; . . . after complete extirpation of the lower end of the rectum the subsequent contraction is often very great, and even at times intractable, and in any case the healing of the wound will be much expedited and the chances of local recurrence diminished by diverting the course of the fecal matter."

Allingham justly condemns the making of a colostomy in every case of cancer of the rectum, stating that "often neither pain nor obstruction will ensue in months, or they may never occur and the patient may die from some other malady. Of course, if a surgeon at once persuades all his patients who have malignant growths in their rectum, to submit to colostomy under the promise that life will be prolonged or suffering averted, he will have many cases to report and very good but very valueless statistics."

There are four factors which make this operation justifiable: First, because the mortality of rectal excision can be immensely reduced by diverting the fecal matter from the site of the excision. Second, because there are in some of the cases excruciating pains, caused by the passage of fecal matter over the ulcerating carcinoma, which can be relieved by a colostomy, winning at the same time for the surgeon the gratitude of the patient. Third, because in those cases in which the disease extends higher than the lower three inches, there is sure to be sooner or latter a stenosis. This Jessop has demonstrated at the late meeting of the British Medical Association. He calls attention to the fact that where the disease is low down in the rectum complete obstruction seldom occurs, and that the opposite is true where the disease is high up. The reasons for this difference are to be found in the anatomy of the parts themselves; for while the rectum, as it approaches the outlet, becomes more closely applied to the sacrum and pelvic wall, in its superior portion it is comparatively free. Thus the contractile action of the colon is exerted with effect in forcing its contents through the contracted ring when that ring is fixed and immovable. But when the narrow portion is freely movable, as it is when situated in the upper portion of the rectum, the efforts of the bowel above succeed only in invaginating or otherwise displacing the growth, and fail altogether to effect any onward movement of the contents (Kelsey). Fourthly, it has been the experience of most operators that the cicatricial contraction which follows such an operation is often excessive and intractable, as in any of the inflammations, specific or simple, which so frequently result in a stenosis here. Allingham has found that if he would maintain the gut in a useful and patulous condition, it is necessary to have the patient

wear a guttapercha tube, which can be removed at will. Finally, an argument which needs no champion is the fact that thirty-three per cent. of all cases of carcinoma (as shown by the researches of Jessop in one hundred and two cases which were allowed to follow their course without any surgical interference) die from obstruction.

To sum up, I would urge that *prior to every excision in every painful case*, and in every case where the disease was situated *high up*, that a colostomy be made, the choice being in favor of the left inguinal. The method of excision recommended by the French surgeons has been that which I have utilized, preceding each excision, however, by a colostomy two or three weeks prior to the final operation. In this the main feature is a deep incision which exposes the posterior segment of the rectum from the anus to the coccyx, when it is an easy matter to dissect out the rectal tube until one comes to the anterior portion. Here, if it is found that the disease involves one or more of the coats of the vaginal wall it is, in my opinion, best to remove a longitudinal segment of the entire thickness of the same, as it both renders the operation safer and more easily accomplished, and does not, as Kelsey would infer, greatly increase the danger. When the sphincters are involved a circular incision should surround the anal opening, and all be removed together. Dr. Guerin's suggestion that the gut be cut through by the ecraseur, modified by the passing through the normal gut of several threads for purposes of fixation of the proximal end after removal, as recommended by Verneuil, has been the procedure employed in the excisions I have made. The proximal end is then to be stitched to the posterior angle of the perineal incision or to the left side of the coccyx, and, after stitching up the vaginal wound in much the same way as after a posterior colporrhaphy or laceration, deep transverse perineal stitches render the making of a new and extensive perineal body very easy.

When the type of the disease is that of the cauliflower-like growth known as papillo-carcinoma, I believe the best practice is to remove it with the curette rapidly and well down to the base of the growth. The hemorrhage, very active and easily provoked while in the soft tissues of the tumor, is easily controlled when the base has been reached. In two such cases I have been successful in for a time relieving them of their distressing symptoms, but have not been able to follow their history for more than six months after operation.

The case I now report is of interest in showing the benefit to be derived from surgical interference.

Case.—After having suffered with what she believed to be hemorrhage, the patient came to St. Luke's Hospital a year and a half ago, with symptoms of absolute stenosis of the intestine, and requiring immediate relief. The diagnosis of carcinomatous obstruction of the rectum being made, a colostomy in the left lumbar region was done, with relief to the urgent symptoms. After the lapse of three weeks, the artificial anus being well established and healed, an excision of the rectum was practiced after the usual methods by a deep posterior incision from the anus to the left side of the coccyx well down to the posterior wall of the rectum, which was then dissected laterally until the vaginal wall was reached, which was found to be involved to the level of the posterior lip of the cervix in the carcinomatous growth. The posterior wall of the vagina was removed, as well as the rectum, to this level, including the sphincter muscles. The rectum was stitched to the skin of the left side of the coccyx, and deep transverse stitches were inserted to make a new perineal body. There was a speedy union and rapid convalescence. After the lapse of one year she returned to me with the artificial anus presenting a normal rectal mucous membrane normally attached to the integument to the left side of the tip of the coccyx, with the artificial anus almost closed from surgical interference by Dr. John E. Owens, but with a return in the perirectal tissue of the original trouble to such an extent that the line of cicatrix in the vaginal wall posteriorly and in the anterior rectal wall was again invaded by the new growth, which was beginning to cause painful defecation as at first. The patient, being much frightened with the symptoms of a return, came to me requesting a repetition of the operation. This at first I refused to make, telling her that I did not believe her longevity could be increased by such a procedure nor her condition materially improved. She then consulted Drs. Parkes and Fenger, both of whom, she stated, promised to operate upon her and offered her hopes of at least temporary relief. Coming back to me with this history and the threat that if I would not operate somebody else would, I had her admitted, in the last week of September, 1890, to the Michael

Reese Hospital, where I excised the portion of the rectum which had been drawn down and attached to the integument, at a point on a level with the posterior lip of the cervix. I dissected out laterally, in so far as I could reach, all indurated tissue. I then found that it was impossible to bring the end of the rectum down to the integument, no matter how far I might extend my posterior incision, and decided that the best thing I could do would be to suture the end of the rectum at the top of the vaginal incision after the cicatrix had been removed. I did this, then united the vaginal mucous membrane, much as is done for a laceration or operation for posterior colporrhaphy, and brought the lateral pelvic tissues together by very deep, heavy silk sutures, and, strangely enough, obtained a perfect union. The patient has, since the second week in November, been at home, is feeling well, has gained in weight, and has several times come to my office, each time stating that she feels better than she did during the year which elapsed after the first operation; that she now has control of the bowel and is capable of evacuating its contents without any artificial assistance—that is, without a douche, which I advised when she first left the hospital.

I believe this to be a unique case. I do not find, in what literature I possess, reference to a similar operation. I have no doubt that she will ultimately have a return of the trouble, because the cicatricial contraction which normally occurs with any inflammatory deposit about the rectum, whether from specific or simple inflammations, has already produced some suspicious induration. (See *Society Reports* for discussion.)

AN INCARCERATED RETROFLEXED PREGNANT UTERUS, WITH GREAT DISTENTION OF BLADDER—SUCCESSFUL REPOSITION—RECOVERY. [1]

BY CORNELIA KAHN, M.D.
PHILADELPHIA.

This grave complication of pregnancy is comparatively rare, yet the importance of its early recognition and prompt treatment is so evident, that a report of every case of this nature must be of value to the profession. Gregoire, in France, Sir W. Hunter, in England, are said to have been the first to fully appreciate the existence of posterior displacements of the gravid uterus, and to have called attention to them. They are far more difficult to manage, and more serious in their consequences than those met with in the unimpregnated state, but of less frequent occurrence, or, at least, fewer come under the notice of practitioners.

This may be due to the fact that in the majority of cases, spontaneous cure occurs about the end of the third month, and the women have had no symptoms urgent enough to compel them to seek medical advice, or a miscarriage occurs, the cause of it not being traced to this condition. If this restoration does not take place of itself, or an endeavor made to rectify the abnormal position as soon as an augmentation of the pains and functional disturbances of bladder and rectum incident to first months of gestation, give evidence of the nature of the trouble, grave results may ensue. This retro-deviation may then end either in abortion, incomplete rectification or incarceration.

Jaggard says, that "The persistence of complete retroflexion and consequent incarceration must be regarded as exceptional events;" but the dangers to be apprehended, when they do occur are great. Cases have been recorded of proctitis, peritonitis, cystitis, sloughing of vesical mucous membrane, rupture of bladder, rupture of posterior vaginal wall, as well as of deaths from shock, exhaustion, uræmia, following these conditions. Other serious complications have also been noted. In the *Lancet* of December 31, 1887, page 1311, a case of retroversion followed by abortion and *sloughing* of vesical mucous membrane is reported. Elliott in "*Obstetric Clinic*" (1872) describes three cases at Bellevue Hospital with one death, and Barnes had four deaths from uræmia, and De Paul one death.

The sequelæ of urinary retention are of gravest prognostic moment, not only sloughing of a part or of the whole vesical mucous membrane, but necrosis of the bladder itself and its peritoneal covering has occurred. Haultain, in the Edinburgh Medical Journal, June, 1890, relates a case of exfoliation of the entire bladder wall, seven weeks after the reposition of an incarcerated gravid uterus. Abortion had been induced by the manipulations to replace the organ and incurable incontinence was the result of the death of the vesical tissue (replaced by connective tissue growth). The following are the notes of the case which forms the basis of the present paper.

C. B., aged 34, German, married, presented herself on Sept. 8, 1889, at the dis-

[1] Read before the Alumnæ Medical Society of Philadelphia.

pensary clinic of the Woman's Hospital in great distress, complaining of intense pain in the abdomen and that she could not "pass her water." With great difficulty, she was placed upon the table for examination. To lie down seemed almost impossible, so severe was the suffering occasioned by the effort to remain in that position. On exposing the abdomen, we saw immediately that there was a peculiar tumor to diagnose. The distension was most marked, the integument having a bluish thinned-out appearance, suggesting the presence of a rupture. The swelling was not uniform, although it extended to the umbilicus; for in this region, there was a pointing or bulging which simulated a hernia.

Palpation and percussion were too painful for us to elicit any physical signs, and a vaginal examination (exploration) was made to ascertain the condition of the pelvic organs. The cervix was found drawn up near the symphysis pubis and a round body was felt in the posterior *cul de sac*. The os uteri having the softened velvety character of early pregnancy, we questioned the woman and found that the menses had last appeared in June.

An attempt was made to empty the bladder with a metallic catheter, preparatory to more thorough examination, but failing to draw any urine, although the meatus urinarius was accessible, we called upon Dr. Fullerton to assist us. She suggested our using the flexible English catheter, and as this instrument did its work, we witnessed the peculiar tumor progressively diminish and disappear. The patient's face, relieved of its suffering and strained look, gave evidence that the pain had ceased.

This was a striking example of the importance of the use of the long flexible catheter in diagnosis of vesical complications in women. Failure to draw urine with the metallic catheter often misleads the physician as to the real condition present, and serious results have been reported.

Three pints of urine were drawn off, but the bladder was purposely not completely emptied. The urine was found to be of a sp. gr. of 1015, neutral reaction, and without albumen.

Bi-manual examination now confirmed the supposition that there was a retroflexed, incarcerated pregnant uterus. Freed from her urgent symptoms the patient was allowed to go home with directions to assume the knee-chest posture often during the day, and to try to urinate while in this position, or bending forward, and return to the dispensary in a few days. On the 11th, three days afterwards, she presented herself again with no marked improvement in her condition, the bladder being again distended, although not quite to the same size as before.

Catheterization again relieved the pressure symptoms, but the patient was advised to come to the hospital for treatment that could be directed towards correcting the displacement. On the next day, she was admitted, and the following history elicited:

Patient had a good family history and had a healthy childhood. Began to menstruate when fifteen years old, and although not painful the flow was always irregular. Constipation was a persistent habit with her. She was married twelve years before, in her twenty-third year,—had five children, the youngest being two-and-a-half years, and no miscarriages. When, after her first confinement, menstruation was again established, it was painful, although it had not been so previously. She stated that "bearing down pains with falling of the womb" and some trouble with urination had occurred following the puerperal periods, with the last two children.

Both these latter symptoms, however, disappeared gradually without treatment, the patient having an interval of comparative comfort. Conception again took place. As already stated, she ceased to menstruate in June, and began then to experience anew the "bearing down pains," the sense of weight and fullness in pelvis. She continued doing her usual work, including the lifting of heavy washtubs, etc. In the second month, micturition became more frequent, effected with difficulty and accompanied by pains in the back and down the legs. She was still of a very constipated habit, although there does not seem to have been marked distress with defecation. Vesical tenesmus gradually increased, micturition was very difficult, and when she came to us the pain had grown intense, and the flow of urine very scant. Every morning there was swelling at the hypogastrium and inability to urinate until after moving about for a couple of hours. Both walking and sitting were alike painful, and the nervous system was necessarily affected to a marked degree.

At last voluntary micturition became impossible. Dysuria gave way to the "incontinence of retention," and from Saturday evening to Monday morning, when the patient came to the dispensary, scarcely any urine was passed, coming merely "drop by drop." Her suffering was extreme, the in-

effectual straining was intolerable, and she was forced to seek relief. Her visits to the clinic and the treatment received have been already detailed. Having now entered the Hospital 5 days after first coming under observation she was put to bed in the knee-chest position, in which she lay for an hour, only to resume it again after resting awhile on her side. After emptying the bladder, Dr. Fullerton, with careful manipulations (two fingers in the vagina, making gentle pressure upon the retroflexed fundus through the posterior *cul de sac*), succeeded, to some extent, in disengaging the body of the uterus from its imprisonment under the promontory of the sacrum, and the patient gave expression to a sense of relief and comfort after this procedure. The vagina was now packed posteriorly with wool pledgets, and a No. 8 flexible catheter inserted in the bladder and retained until the next day, so as to prevent a full bladder from interfering with the correction of the uterine displacement. The necessary adjunct to this line of treatment—the knee-chest position was not forgotten, and the patient was ordered to lie thus as constantly as possible—pillows being placed under her to give her the necessary support. On the following day, the uterus was found in a much better position, the fundus having risen into the abdominal cavity. The pledgets and catheter were now removed and an Albert Smith soft rubber pessary inserted —the patient still remaining in bed. She was now able to urinate without pain. Two days later, the fundus uteri was anterior, the cervix posterior. Patient was now in good condition, gestation not seemingly affected by either the displacement of the organ or by the efforts at restoration to its normal position. The patient was discharged from the Hospital with instructions to assume at times the knee-chest position, to avoid constipation, to empty bladder regularly, and to return when six months pregnant to have the pessary removed, if there should be no occasion, in the interval, to present herself earlier.

From this time forward, she experienced no further trouble, and succeeded in securing a daily movement of the bowels, thus avoiding one factor in the causation of uterine displacements. In due time she was delivered, in the Woman's Hospital, of a fine child, after a normal, easy labor. The recovery, in this case, is thus shown to have been a prompt and permanent one, the danger that threatened was averted, and the lives of both mother and child preserved.

In reviewing the history of this case, there are some points I would comment upon. Authorities differ as to the occurrence of posterior displacements during pregnancy and also as to their abrupt or gradual origin.

Barnes says that retroflection, pure and simple, does not take place in an impregnated uterus, but that it supervenes on some degree of retroversion or prolapse. According to Tyler Smith, "retroflection of the gravid uterus presupposes retroflexion of unimpregnated organ."

Meadows "does not see any causative relation between misplacement of the non-pregnant and pregnant state." Jaggard admits the possibility of *acute* retroversion in a prolapsed pregnant uterus. Many others might be quoted to show the differences of opinion. It is also an open question whether the distended bladder acts as a cause or is a result of the retro-deviation. Sir W. Hunter's opinion "that retention of urine was the primary cause seems to be modified now by the belief that it is an important adjunct in its production, and an obstacle to its reduction, rather than the initial cause.

In the case I have reported, the history of recurrent attacks of bearing down efforts and difficult micturition, with obstinate constipation and painful menstruation since birth of first child, would seem to favor the view of some form of displacement having existed at times during these years.

The early appearance of severe symptoms after this last conception would seem to confirm this, and such being the case, it is easy to conceive how the continual straining at stool, vesical tenesmus and pressure of abdominal muscles in the heavy lifting, would act to depress the fundus still more and thus establish a retroflexion. The restitution of the organ was opposed also by the distension of the bladder, which acted not only by pressure, but by its dragging up the anterior wall of cervix in its ascent into the abdomen. The uterus, thus crippled in its natural movements to free itself from its imprisonment, remained impacted in the hollow of the sacrum.

Diagnosis of these retro-deviations says Parvin, should not be difficult if a thorough examination be instituted, but errors have been made. W. S. Stewart lately reported a case that was diagnosed as a fibroid going to term with the retroflexion unreduced, and in danger of serious exhaustion at time of labor.

In treating this condition of incarceration much difficulty has been experienced in many cases in introducing the catheter. This woman was fortunate in that the meatus urinarius was not so inaccessible.

Various instrumental methods have been employed to rectify the malposition; but gentle vaginal and rectal taxis in the knee-chest posture, is thought to cause less trauma, and must be tried first. It often has been necessary to administer chloroform before reduction was possible. Dr. Playfair, in two cases, effected a cure in twenty-four hours with continuous elastic pressure by means of a pyriform India rubber bag distended with water or air placed in the vagina. Barnes says, frequent daily catheterization cures in a week. Authorities also differ in their modes of after treatment. Bandelocque resorts to the use of the pessary. Cazeaux advises the horizontal position up to sixth month of pregnancy. Jaggard recommends rest in bed in the lateroprone position until the uterus is of sufficient size to retain its position in the abdominal cavity.

With our patient, the line of treatment was simple and rational. The first measure to be resorted to before attempting reposition of the displaced organ, the evacuation of the bladder, was promptly done, and its refilling prevented by the constant drainage through the retained catheter. The knee-chest position and packing of the vagina, after the manipulations, and ridding the rectum of all fœcal accumulations, were the elements of successful treatment, which lasted only three days. The use of the pessary, adjusted before patient left the bed, with due attention to the functions of bladder and intestines, and the frequent employment of the genu-pectoral posture, assisted in maintaining the pregnant uterus in the normal relation to the line of the pelvis. Rest in bed for any length of time was not practical, as there was a family of children to be cared for.

The capacity of the distended bladder, in the case reported, was about fifty ounces, but in one of those related by Elliott the bladder contained the remarkable quantity of one hundred and forty ounces. Notwithstanding this fact, the patient did not suffer as had ours, having no symptoms urgent enough, even to direct the attention of the physician to this viscus. In the case, already cited, of Haultain's the bladder held as much as one hundred ounces of porter-colored, offensive urine, even though its walls were in a state of decomposition and consequent diminished muscular elasticity.

Dr. E. Richter has found that fresh urine destroys the bacilli of anthrax, cholera and typhus.

Society Reports.

The Gynecological Society of Chicago.

Dr. L. L. McArthur read a paper on (see p. 532).

Cancer of the Rectum.

Dr. C. T. Parkes.—The case as presented by Dr. McArthur is very interesting to me, and, I think, he is to be complimented on the skillful attention he has given to this patient and the success which has resulted from his interference. It seems to me, we must look upon this operation for the relief of this terrible disease mainly as a palliative treatment; it is seldom curative. Certainly it removes the manifestations of the disease for a time, and, above all, is desirable, as Dr. McArthur has said, from the fact that it relieves the patient from the local distress caused by the disease, especially from pain, which is present in all these cases, and the symptoms of on-coming obstruction which accompany the later stages. My experience with it has been rather moderate; as I recall the cases I have met, and have thought a little about them since receiving the notice of this meeting, there come to mind *nine* cases in which operation has been done for excision of the rectum, two cases in which simple incision was done, and two cases which are interesting from the fact that they accompanied the presence of ovarian tumors, and one case which was situated very high in the rectum and no interference was practiced—in all fourteen. Of the nine cases in which excision was done, five were operated upon according to the plan of Kraske; in the others success was attained in the removal of the manifestations of the disease by merely external incision of the soft parts, without interference with the sacrum or coccyx.

Of these cases, which represent a period of work of eight or ten years, some are living to-day, but most of them are dead. None of the cases of excision were preceded by an opening into the colon. I think the statistics which the doctor gives as to the mortality of the disease as the result of immediate excision is based upon the results of pre-antiseptic days rather than the present. I am not one of those who believe that the contact of fecal matter with the wound is at all times hurtful, as I have had in my experience many cases in which wounds have been bathed in fecal matter without any septic condition following.

I can see readily enough that the previous operation for an artificial anus can be a benefit to these cases, and will likely predispose to the earlier and more rapid healing of the rectal wound, simply because it prevents the fecal material from passing over the raw surface. The operation of forming an artificial anus in itself is of little consequence, and should be, as a rule, attended with little fatality. That it is a necessary procedure I am not inclined to believe; neither do I think that it makes very much difference in the mortality. As far as the relief given in preventing the discharge from coming over the wound is concerned, I have to agree with Dr. McArthur's statements.

The disposition is in all these cases to a comparatively rapid return of the disease. We must always remember, in the treatment of cancer here as well as elsewhere, that the operation itself may stimulate or produce infection. In two cases in which the operation was done by myself, there followed no local manifestations of return of the disease, but within eighteen months there appeared to be general infection of the entire body, as shown by evidence of disease in the liver and in the lung, and the presence of cancerous nodules of different sizes in the integument.

There is no question but that every one of these patients will be grateful to the surgeon for the removal of the manifestations of this disease; but, as I said before, we must look at it in the true light and tell these patients that the relief is only temporary and cannot often be curative where the disease is really cancerous in its nature. Again, we must bear in mind that quite a number of surgeons of great experience—men who have seen this disease in all its conditions and ravages—believe that the establishment of an artificial anus itself is a sufficient relief to the case. Dr. Thomas Bryant, of London, is not an advocate of excision, but is an advocate of an artificial anus and relieving the patient entirely of the necessity of using the diseased portion of the bowel for the transmission of fecal matter, and thereby allaying inflammation.

Again, we must remember that other operations are done besides excision of the rectum, which is a formidable operation and leaves disgusting results in many cases. Some other operations have been done which surgeons of experience believe to be efficacious; these are local in character—that is, the complete division of the mass backward towards the sacrum, in that way providing for the easy exit of the fecal matter. Of course, the era of operative procedure is upon us, and particularly is this operation advocated by European surgeons, and also very largely by American surgeons; but I think if all the cases were examined as carefully as those cases have been which Dr. McArthur has presented to us to-night, and discussed as coolly and calmly as he has discussed them, none of us would be very much in favor of promising a great deal for the operation.

Dr. Henry T. Byford.—I would like to emphasize what Dr. Parkes has said, that this is a palliative operation and not justifiable when it is immediately very dangerous to the life of the patient. The case related was very interesting to me, because it is similar to a case which I have treated, and which illustrates the principle which should be carried out in treating cancer of the rectum in women. In this case the sphincter was not involved, although the rectum from about two-and-a-half above down nearly to the sphincter was affected on its anterior and lateral aspect. I removed portions of the lateral and anterior rectal walls, and the posterior vaginal wall. Instead of drawing the parts together in front of the rectum, I operated upon the principle that all raw tissue not covered by mucous membrane will contract and obliterate the entire tract within it; so I endeavored to secure as large a surface of mucous membrane for the canal as possible by leaving the vagina open and merely closing up the vaginal entrance. There is another reason for removing, in cancer of the rectum, all of the rectum that we can, viz., that a return of the disease in connective tissue is not as painful as when it attacks the viscera. In this case the patient was able to evacuate the bowels until the entire pelvis was filled up with a mass of carcinomatous tissue, without very much pain. She died finally of exhaustion more than anything else. The point in all these cases is to get as much mucous membrane as possible, using the vagina the same as in any other operation.

Dr. L. L. McArthur, in closing the discussion, said: In presenting the patient this evening, I did not do so to advocate such an operation, although it does seem to me that, in cases in the female in which carcinoma occurs low down in the rectum, in reality it would be a procedure more advisable than to make an artificial anus at one side of the tip of the coccyx, because of the statement of the patient that she knew when the bowels desired to move. She had a peculiar feeling, she says, and has the power to expel the contents, thus escaping

the exceedingly distressing symptoms of involuntary discharges, which always occur with an artificial anus at other points. In regard to the statistics which I quoted as collected by Kelsey, in the article which he wrote on this subject for the "Reference Hand-book of Medical Sciences," published in 1886, he stated that the mortality from the operation of excision was thirty-three per cent. In Sajous' *Annual* for 1890, there is a collection of statistics after Kraske's operation, and the mortality is stated at fifty per cent. Kelsey happens also to be a contributor to this department of Sajous' *Annual*, so the mortality has rather increased than decreased for the last year, according to the same man's statistics. He bases this fifty per cent. mortality on seven cases done by Kraske himself, three by Schönborn, one by Rinne, and the remainder by Lauenstein, twelve in all, in which six died as the result of the operation; some by septic peritonitis (two), some by sepsis (two), and some from exhaustion.

As Dr. Parkes says, there are a large number of surgeons who advocate simply making a colostomy and interfering to no further extent with the case. In some excellent statistics collected by Cripps, we find that out of cases which he watched personally in London hospitals and studied carefully, life was lengthened on the average from seventeen months to twenty-two months—that is, there were five and a half months added to the longevity by simply making a colostomy; which shows that it is decidedly advantageous. Colostomy, I believe, will aid in lowering the mortality in cases of excision, whether done for pain or for obstruction. As to the operation being of dubious value, there is much to be said on both sides; there are, however, some well-recorded cases in which, the operation having been performed at an early day, the life of the patient has been preserved. One case was living in 1886 that had been living for seven years since the operation, and no return was to be seen, and five cases in which no return was seen in two years.

It has impressed me that some of the gynæcologists of the Society would comment upon the probability of endometritis with infection through the uterine canal and tubes as being very likely to occur in such a procedure, as was exhibited in my patient, and I would like to ask the President whether such an inflammation would be probable in a woman who had passed the menopause.

EDISON'S EXPLANATION OF THE AMPERE AND THE VOLT.

During a recent examination a lawyer put the following question to Thomas A. Edison:

"Explain what is meant by the number of volts in an electric current?" To which he replied:

"I will have to use the analogy of a waterfall to explain. Say we have a current of water and a turbine wheel. If I have a turbine wheel and allow a thousand gallons per second to fall from a height of one foot on the turbine, I get a certain power, we will say one horse power. Now the one foot of fall will represent one volt of pressure in electricity, and the thousand gallons will represent the ampere or the amount of current. We will call that one ampere. Thus we have a thousand gallons of water or one ampere falling one foot or one volt or under one volt of pressure, and the water working the turbine gives one horse power. If, now, we go a thousand feet high and take one gallon of water and let it fall on the turbine wheel, we will get the same power as we had before, namely, one horse power. We have got a thousand times less current or less water, and we will have a thousandth of an ampere in place of one ampere, and will have a thousand volts in place of one volt, and we will have a fall of water a thousand feet as against one foot. Now the fall of water, or the height from which it falls, is the pressure or volts in electricity, and the amount of water is the amperes. It will be seen that a thousand gallons a minute falling on a man from a heighth of only one foot would be no danger to the man, and that if we took one gallon and took it up a thousand feet and let is fall down it would crush him. So it is not the quantity or current of water that does the damage, but it is the velocity or the pressure that produces the effect."

It has been calculated that the electromotive force of a bolt of lightning is about 3,500,000 volts, the current about 14,000,000 amperes, and the time to be about $\frac{1}{2000}$ part of a second. In such a bolt there is an energy of 2,450,000,000 watts, or 3,284,182 h. p.—*Scientific American.*

Gunpowder Stains of the Face may be removed by painting with biniodide of ammonium, distilled water, equal parts; then with dilute hydrochloric acid, to reach the tissues more deeply affected.—*Revue de Therapeutique.*

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THE PRESENT STATUS OF THE KOCH TREATMENT OF TUBERCULOSIS.

The absence of exact science in the medical knowledge of the day, has perhaps been nowhere so well exemplified as in the extreme readiness of both profession and laity to accept the unproved word of a single man in relation to a hitherto unanswered and weighty question in therapeusis—that of the existence of a specific control of the tubercular process. Nor is the precipitate haste on the part of the clinicians to condemn the method, as yet not even half tried, any more evidence of the development of stable principles in our methods of combatting disease processes. From a theoretical stand-point, excluding from present consideration the general care and management of the patient, the destruction, or modification of the materies morbi is to be accomplished in four probable ways, these include: the utilization of the antagonism of micro-organisms toward each other; the deleterious effect of micro-organismal products on the growth of micro-organisms; the unfavorable effects on micro-organisms of certain agents of mineral or organic origin; and the production of general surroundings unfavorable to the advance of the infection, both in the individual and in the community. To the second of these groups is to be referred the method recently proposed by Prof. Koch for combatting the tubercular process. This method, which is substantially if not precisely identical with the measures previously employed and announced by Dixon of this city, has for its underlying principle a fact, the verity of which may easily be recognized by analogy in numerous instances of the incompatibility of waste products with productive growths. Thus alcohol, as a product of vegetable activity manifested as fermentation, when present in proportions beyond 20 per cent., is sufficient to retard and eventually destroy the actions and vitality of the ferment. Nor is the use of the products of bacteria as a means of altering the further growth of bacteria in the animal tissues by any means a recent one, as may be noted in relation to the work done upon the bacillus pyocyaneus by Charrin and others. Separation of the fluid product of the growth of this last bacterium from the culture itself, by means of an unglazed porcelain filter, and inoculation with this sterile product has prevented the inception of pyocyanic disease in animals after subsequent inoculations with virulent matter. Probably the same principle underlies the Pasteur method of hydrophobic prevention; and

the field of preventive medicine glows with promise of great and near discoveries in this same line in other diseases.

The substance used by Koch in his experiments and more recently in the treatment of tuberculosis in man, and which, as already stated, is produced in practically the same manner by Dixon, is obtained from cultures of tubercle bacilli exposed to altered conditions of life by means of extraction with some such menstruum as glycerine. This material, from which no definite active agent has been eliminated by Koch, when brought into contact with tubercular growth in the animal economy, is announced to produce decided lowering of activity of growth and eventually, if in sufficient proportion, to permanently stop the morbid process. In the animal economy, further, as an evidence of its action, whether by direct action upon the germ, or by inducing deleterious changes in the tubercular tissues, there is manifested a febrile re-action; and as a result of its action it is stated that there is a destruction of the diseased structures and subsequently their replacement by cicatricial tissue. The exact mode of operation is not known, various theories having been offered in explanation.

Such was the knowledge established by the researches of Dixon and Koch, and eagerly seized upon by the entire world in the expectation of mastering tuberculosis. In the natural course of the rapid popularization of so important a discovery, the limits of its application have been wittingly as well as ignorantly widely overstepped; badly diagnosed cases and cases whose only cure can be death have been subjected to the vicissitudes of the treatment. With an eye singly to the result of the means upon the tuberculosis, cases have been permitted to approach the fatal termination because of the neglect of the true end, the recovery of the patient; and too often even the increased nutritive need of the weakened system has been passed by in the endeavor to overcome the process at fault. Clearly, in the method of action of the substance it was to be recognized that its only safe application could be found in the most localized forms, and preferably in foci where elimination of the products could be performed most thoroughly and with least severity to the organism; nevertheless, in the mad hurry, cases of advanced degrees of the disease and cases marked by generalization of the malady have been permitted the treatment, only to swell the death list which has been heaping discredit upon the measure. Where tubercular foci are numerous and widely distributed, if each focus is to be the scene of rapid necrotic processes, each followed by a local focus of reactive inflammation, what is to be expected but the effects of an intense toxæmia and fever, which are the necessary attendants of such a condition?

Where the lungs are riddled with the tubercular changes of late chronic phthisis, what is to be expected if this new therapeutic agent accomplish the best possible results, and yet leave a great mass of cicatricial tissue to block up and hamper the pulmonary tissue? Moreover, what of that great mass of patients, from whom, the treatment having failed to produce notable external changes, the lymph was withdrawn and death followed—are there positive evidences of no palpable changes in the internal tubercular localities in the line of change indicated? How is it possible from post-mortem appearances to affirm absolutely the generalization of the tubercular process in this or that position, within a definite and brief period? These are the considerations upon which more information and more definite knowledge should be demanded from those who condemn the method. Its action upon true cases of lupus has been too decisive to permit, in other localized forms of tuberculosis, any discredit until more exact information is had. The conflict of reports is too great at the present date and the tendency of medical opinion too observant of so-called policy to allow an absolute decision; this will and can only come when the lymph method has fallen entirely out of injudicious hands and is left to the investigation of the cautious and thoroughly interested.

There are other phases of the subject, too, which cannot fail to attract attention in the future. How much of the severity of the reactions, and how much the failure in results may be due to the presence of substances other than the essential toxalbumen in the lymph? What auxiliary measures are those best adapted to the furtherance of the favorable results of treatment? Finally, if even in mild cases of pulmonary tuberculosis failure should be established, there is one other point of the utmost importance to be further examined. In the earliest paper of Dixon (Med. News, Nov., '89), antedating Koch's announcement by more than a year, there were distinct expressions of the development of immunity in animal tissues against the tubercular process by this general method; and investigations carried on in rabbits and guinea pigs have with considerable uniformity confirmed this hypothesis. It is undoubtedly an injudicious act to inoculate healthy individuals with an agent of which so little is known as this mixture of the retrograde products of tubercle bacilli, but it has been and doubtless will be done more or less frequently for a time. There are no positive arguments in relation to tuberculosis refuting the usual rule of infections to protect against themselves; and there do occur occasional cases whose clinical histories present features not averse to this view. For example, within the knowledge of the writer, a young man of questionable family history, who for 20 years had had a destructive scrofuloderm only cured within the past few years, became accidentally inoculated with tuberculosis, while performing an autopsy upon a tubercular body. To ordinary observation, the usual course of inoculated tuberculosis was manifested, the healing of the original wound, the period of some days' quiescence, the formation of a nodule at the site of sore, and the breaking down of the surface into a slightly purulent fluid to the formation of a tubercular ulcer. Within more than a month no lymphatic involvement had become manifest, and the local node was removed by operation. Thus far, nearly five months, there is no evidence of general infection. Such cases have occurred before and the process remained for a long time localized—yet may not the previous tubercular condition as manifested by the existence of scrofula, have exerted some limiting influence upon the inoculated process? The existence in otherwise normal lungs of isolated and calcified nodes of old tubercular processes may suggest the protective value of the results of the prior disease; and where these are associated with evidences of general advancement of the process there enters the question of whether there had not been at least a temporary protection analogous to that afforded by vaccination.

This then is the status of the proposition. The statements denying value to the treatment of tuberculosis by the method of Koch, whose claim to consideration rests upon what appear to be general laws, and is corroborated by laboratory researches, lose their own force from the numerous faults of omission and commission met in the widespread and ignorant application of the method. Even should it fail as a curative, except in the localized and superficial variety known as lupus, there is yet another field for its usefulness open to investigation, its possible preventive power.

Dr. J. T. Rothrock, Prof. of Botany, in the University of Pennsylvania, has sent out his vacation circular for the fourth season.

The Doctor's plan is to take charge of lads who are below par physically, but who need moderate, systematic exercise in the open air, good food, and early hours, rather than medicine. The plan includes sailing on one of the safest of vessels, deep-sea fishing, foot-ball, lawn-tennis, target practice, etc. At night instruction is given on methods of prompt action in an emergency—"until the doctor comes."

Thus far the Professor asserts there have been nothing but good results from this novel plan.

Dr. Rothrock is a gentleman of experience, a physician, explorer and teacher. Parents may trust their sons in his hands with

the assurance that they will be conscientiously and wisely cared for.

OBITUARY.

DR. JOSEPH LEIDY.

On April 30th, after a brief illness, Dr. Joseph Leidy, passed away. He was Professor of Anatomy and Zoology in the University of Pennsylvania, the most distinguished naturalist of America, a man whose lasting achievements secured the highest recognition throughout the entire scientific world, whose personal characteristics won the warmest affection of all who had the privilege of his friendship.

Joseph Leidy was born in Philadelphia, Sept. 9th, 1823. His inclination towards the study of natural history was early manifested, when, as a school boy, he secured text-books and began the study of mineralogy and botany, thereby laying the foundation of that immense store of knowledge, which his unaided efforts and ceaseless industry made his own. As a youth, he also displayed a remarkable facility for drawing, a talent which, in after years, rendered his scientific contributions conspicuous.

After several experiences, it was determined that he should adopt a profession, in which his devotion to the natural sciences—becoming ever more pronounced—would find opportunities for congenial employment; he, therefore, in 1840, entered upon the study of medicine, under the guidance of Drs. James McClintock and Paul B. Goddard, graduating from the Medical Department of the University of Pennsylvania in 1844. His thesis was an admirable essay on the "Comparative Anatomy of the Eye of Vertebrated Animals."

During the years of his medical course, his favorite studies, in the domain of more purely scientific biology were by no means neglected, for in the same year of his graduation, he contributed a brilliant chapter on the "Special Anatomy of the Terrestrial Molusks of the United States" to Binney's monograph.

Immediately after receiving his degree, he became assistant to Prof. Hare, the distinguished occupant of the chair of Chemistry in the University of Pennsylvania at that time, thus already indicating the broadness of his scientific interests. In 1845, Dr. Leidy was appointed Prosector in Anatomy, thus beginning the services in the anatomical department of the University, which, with a slight interruption during the succeeding year when he was demonstrator in the Franklin Medical College, have terminated only with his death. As Horner's successor, Dr. Leidy became, in May, 1853, professor of Anatomy in the University of Pennsylvania, to which chair that of Zoology and Comparative Anatomy was added a few years ago. In 1871, he became, likewise, professor of Natural History in Swathmore College.

Three years after his graduation, "The Fossil Horse of America" appeared, the first of those paleontological contributions which were to make Leidy's name known in all lands. The most important of these have been:

Ancient Fauna of Nebraska. 1853.

Memoir on the Extinct Sloth Tribe of North America. 1855.

Cretaceous Reptiles of the United States. 1865.

Extinct Mammalian Fauna of Dakota and Nebraska: together with a Synopsis of the Mammalian Remains of North America. 1869.

Contributions to the Extinct Vertebrate Fauna of the Western Territories. 1873.

Description of Vertebrate Remains from the Phosphate Beds of South Carolina. 1877.

The preparations of these monumental works, however, by no means exhausted the industry of this indefatigable worker, for his additional contributions during these same years were numerous and varied.

Among the first in this country to use the microscope as an instrument of scientific research, Prof. Leidy always delighted in studying the minute forms of life and the details of structure it alone revealed. Early

in his career, his classic paper on "Researches on the Comparative Structure of the Liver," (1848) and other kindred contributions established his ability as an histologist.

The study of parasites also became a favorite field with this investigator, whose numerous discoveries, as recorded in the Proceedings of the Academy of Natural Sciences of Philadelphia, bear testimony to the success with which his labors were attended. It is interesting to note that, in 1846, Dr. Leidy recorded the discovery of a species of trichina in the hog, and stated that it appeared to be identical with the trichina spiralis, which he had met with in the tissues of the human subject; later, this observation materially aided Leuckart in unravelling the relation between the parasite in man and in the hog. The appearance, in 1853, of the beautifully illustrated monograph, "Flora and Fauna within Living Animals," added a contribution of permanent value to the literature pertaining to microscopic parasites, to which its author subsequently made so many important additions.

The fondness for the study of the lowest forms of life, which had always been a source of never failing pleasure and recreation from the fatigues of more burdensome duties, led Dr. Leidy to undertake a systematic investigation of the forms found in this country. The results of this research appeared in the quarto volume, "The Fresh-water Rhizopods of North America", the splendid illustrations of which are the delight of every student. These plates, charming as they are, in many instances fall far short in reproducing the exquisite beauty of the original drawings from Leidy's skillful pencil and brush.

As teacher of anatomy in a great medical school—in which capacity not a few readers of the Reporter have profited by his learning, during the thirty-eight years that have elapsed since his accession to the chair—Dr. Leidy appreciated the burden imposed on the student by the useless complexity of nomenclature, as well as by the perpetuation of errors grown classic by the sanction of precedent. He, therefore, set about the preparation of a text-book which should describe the human body as he saw it, freed, as far as possible, from all cumbersome terms; in 1861 was published "An Elementary Text-book on Human Anatomy," which for clearness and accuracy of description has never been surpassed; the second edition of the book (1890) even more fully justifies its favorable reception.

Some idea of the achievements of this life of ceaseless industry and untiring devotion to investigation may be had, when it is learned that the published communications, of all kinds, number about one thousand. While Prof. Leidy's eminence as a great naturalist has been cheerfully accorded at home, foreign countries have not been tardy in expressing their appreciation of the valuable services he has rendered in the advancement of those fields in which he has labored, since the honors conferred upon him by learned bodies abroad, include honorary membership in almost all the foreign societies of note devoted to the natural sciences.

The peer of the greatest, Leidy, together with such men as Owen and Huxley, Johann Müller and Agassiz, Köelliker and Henle, represented a generation of scientists almost past away—men, whose privilege it was to be of the van-guard of Biology, to live in those golden days when, on every side, new discoveries rewarded the scrutiny of the keen investigators, whose minds, already richly stored by broad training, became the repository of an ever-widening insight into natural phenomena. Men, whose energies were engaged in mapping out the salient landmarks of their science, whose comprehensive field was all nature, and on whom the limitations of an age of specialties had not been exerted.

Great as our admiration and respect for the splendid scientific attainments of Dr. Leidy must always be, it was, however, the personality of the man that drew towards him the warmest regard of all who came within his influence. They who learned to know him—majestic in his noble simplicity,

unassuming in his greatness, approachable by all seeking knowledge, to whom the youngest student turned assured of a kindly reception, a patient ear, and sound advice; ever the last to allude to his own achievements, but fearlessly expressing his own honest beliefs when occasion demanded, devoting to science his entire life, not for his personal glory, but for the advancement of knowledge—could not fail to honor the man truly great and good! A nature to which petty jealousy and conventional circumlocution were alike unknown. A man whose tender heart and quick sympathies were overruled alone by his sense of duty, and by his absolute, unwavering devotion to the truth. G. A. P.

CORRESPONDENCE.

Dr. S. E. Young of Midland, Ga., writes: Please inform me, (1.) Whether females experience an orgasm in sexual intercourse, similar to that experienced by males.

(2.) Give the philosophy of such orgasm.

(3.) You will also oblige me by stating whether women who are pregnant have any sexual propensities.

(4.) Advise me as to the probable procreative powers of a man who has twice had double gonorrhœal epididymitis, each epididymis being left somewhat nodular.

(5.) How can seminal fluid find its way into the receptaculum seminalis when the calibre of each vas deferens has been obliterated by adhesive inflammation?

[(1.) As far as our information goes the orgasms in the two sexes are essentially identical.

(2.) Not knowing the philosophy of the operations in the nerve cells we cannot explain.

(3.) Yes, as a rule, but in abeyance.

(4.) Practically *nil.*

(5.) Of course, if the vasa deferens are obliterated, the seminal fluid could not find its way into the receptaculum save by burrowing through the tissues, which is highly improbable.—ED.]

PERISCOPE.

THERAPEUTICS.

THE USES OF NITRATE OF SILVER AND SULPHATE OF COPPER IN OPHTHALMOLOGY.

Grandclement (*Lyon Médical*, March 8, 1891) carefully reviews the principal remedies used locally in eye affections, with especial reference to the sulphate of copper and the nitrate of silver.

He considers the copper salt one of the best agents in the treatment of granular ophthalmias, applied either in solution or in the solid form. The cauterizations are painful even after the previous use of cocaine. It, however, is one of the most serviceable remedies in all the superficial inflammations of the eye. The *divine* or blue stone is said to be composed of equal parts of copper, alum, and nitrate of potassium.

The nitrate of silver is extremely dangerous in ulcerations of the cornea, as it is very apt to form, in such cases, disagreeable incrustations of chloride and albuminate of silver. In the treatment of purulent ophthalmia the author has been in the habit of cauterizing the conjunctiva every twelve hours, neutralizing the strong action of the salt with a little salt-water applied by means of a soft brush. Endeavors should always be made to protect the cornea from the action of the silver nitrate. The solution of this salt should be freshly made and placed in a black bottle, otherwise it will decompose into the oxide of silver and nitric acid, this producing deep eschars upon the conjunction. In spite of these incoveniences, however, nitrate of silver is the best germicide, so far, in the treatment of purulent ophthalmia. The author has obtained rapid and beneficial results in the treatment of crescentic and sloughing ulcers of the cornea by means of a finely pointed stick of nitrate of silver, being careful not to touch the borders of the ulcers.

THE INFLUENCE OF WARM ENEMATA IN THE TREATMENT OF TYPHUS FEVER.

From a study of the subject, T. K. Geisler (*Æsterr ungar Centrablatt*, Feb'y, 1891), draws the following interesting conclusions: 1. Immediately after the injection the temperature of the whole body is somewhat raised (maximum 0. 2.° C). 2. Warm enemata exercise a favorable influence upon the intestines, as they diminish the number and

quantity of excreted matters retained in them. 3. The injections provoke a rapid fall of temperature and transform a continued fever into a remittent and intermittent disorder. 4. After the administration of the warm enemata, the pulse immediately becomes diminished in frequency, but it returns to its original rate in about an hour. The pulse in general is very hard and full and the cardiac contraction very strong; the dicrotism is little influenced. 5. The respiration, soon after the injections, is generally hurried. An hour afterwards, it begins to get slower. 6. The blood pressure is increased by warm enemata. 7. Under the injections the quantity of urine is increased, and its specific gravity diminished. 8. The cutaneous and pulmonary exudations are diminished.

UNTOWARD EFFECTS OF EXALGINE.

A case of poisoning by exalgine is reported by Buisson (*Bull. Génér. de Therap.*, March 15, 1891). A man, 60 years of age, suffering from influenza, accompanied with gastric disturbance, was ordered antipyrine but was given by mistake thirty grains of exalgine, which he took in the course of three hours. A similar amount was injected on the following morning. Symptoms of vertigo, with extreme dyspnœa and pronounced cyanosis were experienced soon afterwards, and lasted for two days. The patient recovered.

ARISTOL IN VENEREAL DISEASES.

Vincenzo Fisichella (*Riforma Medica*, 1891, p. 238) has tried aristol in the treatment of simple and syphilitic chancres, buboes, mucous and gummous patches, and has arrived at the following conclusions: 1. In simple or syphilitic chancres aristol produces after a certain time a drying up of the ulcer. 2. In phagedenic lesions the drug is of some use but does not produce a curative action. 3. Compared with iodoform, it is less efficacious, and can only be preferred on account of its odorless properties. 4. It is easily pulverized and it adheres well. The author does not believe that aristol is destined to be of much use as a remedy for the treatment of syphilitic disorders.

NEW METHODS OF TREATMENT IN TYPHOID FEVER.

Dujardin-Beaumetz (*Bulletin Gén. de Thérapeut.*, December 30, 1890) studies prophylaxis of typhoid fever, and the use of intestinal antiseptics, cold baths and diuresis in the treatment of the disease.

Prophylaxis has been more benefited than has treatment by the discovery of the bacillus of Eberth. To purify water, boiling or sterilization is better than filtration. Rigorous care of typhoid patients is insisted upon; a strong solution of sulphate of copper, twelve and a half drachms to the quart, is recommended for washing sheets, water closets, etc.; a weaker solution, three drachms to the quart, is used to disinfect the nurse's hands and those portions of patient soiled by ejecta. In studying intestinal antisepsis, introduced by Bouchard, salol is preferable to iodoform, naphthaline, naphthol, etc., since it is less harmful and more efficient. Thirty to sixty grains may be given in twenty-four hours, in combination with salicylate of bismuth, if this drug is indicated.

Dujardin-Beaumetz does not regard hyperpyrexia as a part of the general condition of the disease, believing that typhoid fever can be serious without hyperpyrexia or that the temperature can be kept normal by antipyretics without decreasing the severity of the disease. He believes that antipyretic drugs decrease urinary secretion and retard elimination of the poisons produced. He finds that in sponging, enveloping in wet sheets and tepid baths, he has all the advantages of cold baths without their inconveniences. By a tepid bath he means one with a temperature of 86° to 89.6° F., making it about eighteen degrees below the patient's temperature; with these baths sedation of nervous phenomena is obtained, together with sufficient lowering of the temperature. Opposing Brand's systemization, he treats cases symptomatically; beginning with sponging, he gives tepid baths, if the temperature passes 104° F., one or two a day, lasting twenty to thirty minutes. Stimulating drinks are given patients, if needed, while in the bath. If ataxo-adynamia becomes excessive, wet-packing is used instead; this pack is not continued for more than thirty seconds.

Sulphate of quinine is regarded as the drug best able to meet the general indications of typhoid, not more than fifteen grains a day being given. He does not believe that the benzoate of soda recommended by Robins increases the elimination of waste products; believing the kidneys are the best agents he gives abundant drinks, preferably lemonade made with wine, to favor diuresis.

He calls attention to the remarkable paper of Brouardel, showing the great in-

fluence of typhoid mortality on depopulation in France, the mortality in women being twice as great as in men. In studying the influence of the treatment on mortality, he finds that the difference under the various methods is trifling; in 1889, under symptomatic treatment, there was a mortality in the hospitals of Paris of 11.33 in a hundred; by systematized treatment with cold baths, the mortality was 11.28 in a hundred. The lowest mortality for the year, 7.33 in a hundred, was obtained by the combined use of quinine and tepid baths.

Debove has shown that prudence is necessary in reaching therapeutic conclusions from the study of statistics, for by the purely expectant plan without hygienic treatment, he had a mortality the same year, at the Andral Hospital, of 9.2 in a hundred. Beaumetz believes that this success rested largely on the diuresis obtained by Debove. —*University Medical Magazine.*

CARPAINE.

A new alkaloid has recently been detected in papaw-leaves by M. Greshoff, of the Chemico-Pharmacological Laboratory at Buitenzorg, in Java. It was obtained by digesting the powdered leaves in spirit acidulated with acetic acid, removing the spirit by distillation, and treating the resulting extract with water so as to leave behind resin and chlorophyll. The aqueous solution was then shaken repeatedly with ether, and carbonate of sodium was added until an alkaline reaction was evident, The precipitate thus obtained was readily soluble in ether, and on evaporation of the ether the "carpaine" was obtained in colorless rosettes of crystals to the extent of about .25 per cent. of the leaves employed. Although the freshly-precipitated alkaloid is readily soluble in ether, when once crystallized it redissolves but slowly, so that the crystals can be purified and rendered perfectly white by washing with a little ether, but the percentage obtained is thus reduced to .15 per cent. On a large scale, the lime and petroleum method gives very good results, about .19 per cent., and would probably be preferred on the score of expense. Comparative experiments made on the young and old leaves, freed from the stalks, show that the old leaves afford when dried .072 per cent. of the alkaloid, and the young leaves .25 per cent., and that, on an average, a papaw plant can be calculated to afford thirty grammes of the alkaloid per year from the leaves. The hydrochlorate of carpaine, which contains about eighty-two per cent. of the pure alkaloid, is freely soluble in water. As yet, comparatively little is known of the physiological actions of the alkaloid. It appears, however, to act more especially upon the heart, slowing its action. The lethal dose for a fowl of five hundred grammes (one pound) weight was found to be about 200 milligrammes (three grains). In a fowl of three hundred and fifty grammes weight, no poisonous symptoms were produced with 50 milligrammes of the alkaloid; with 100 milligrammes, symptoms of poisoning occurred in ten minutes after injection into the breast muscles, but after twenty-five minutes the animal recovered its normal condition. The bird lay on its side, and breathed deeply in a jerky manner, and showed slight convulsive movements of the whole body, but no irritability was noticed. Further observations are necessary to determine the usefulness or otherwise of the alkaloid in medicine. Should it prove of utility, there can be no difficulty in obtaining it in almost unlimited quantity and in a definite crystalline condition. The alkaloid is easily precipitated from its solutions. by the alkaloid reagents. The most delicate reaction is with Mayer's reagent,—iodo-iodide of potassium,—which, in a solution of 1 in 300,000, gives a turbidity, and in 80,000 parts an evident precipitate; phosphomolybdate of ammonium has its limit of reaction at 1 in 75,000 parts, picric acid at 1 in 30,000, and chloride of gold at 1 in 25,000. The alkaloid has a bitter taste, which is perceptible even in a solution of 1 part in 100,000.—*Pharmaceutical Journal and Transactions*, December 27, 1890.

CASES OF POISONING BY BROMOFORM.

Bromoform has been recommended by numerous observers, in the strongest terms, as a remedy in whooping-cough, but Dr. Nauwelaers (*Revue Mensuelle des Maladies de l'Enfance*, February, 1891) reports a case of poisoning in a child, aged 1 year and 3 months, suffering from whooping-cough, by 2 drops of a solution of 7 drachms to ½ of bromoform, dissolved in an equal amount of alcohol, and given eight times daily.

The symptoms produced were profound stupor, paleness, coldness, complete muscular relaxation, tracheal rales, feebleness of respiration and circulation, contraction and immobility of the pupil, and insensibility of the cornea. The case proved fatal, and at the autopsy there was found slight congestion of the brain, marked injection of the

stomach and duodenum, and great increase in bronchial secretions.

In the *Provincial Medical Journal* for February 2, 1891, is a second case reported by Dr. E. Sachs, of a 4-year old child, in whom 3 drops of bromoform were ordered three times a day. In the absence of the mother, the child—doubtless tempted by the sweet taste of the mixture—got at the bottle, and drank what remained in it,—that is, about 15 minims of bromoform. Some time after, the child suddenly turned pale, and, staggering about, was put to bed. When seen by Dr. Sachs it was lying in a seemingly lifeless condition, with fixed dilated pupils, cyanotic lips, imperceptible pulse, and cold extremities. Injections of ether (Pravaz's syringefuls) and the application of a stream of cold water to the chest and back, soon brought the little patient back to consciousness, and the next day it had entirely recovered.—*Therapeutic Gazette.*

A NEW METHOD OF ADMINISTERING DIGATILINE.

A new method for the administration of dangerous drugs has been proposed by Petit (*Rev. Gener. de Clin. et de Therap.*, March 11, 1891). It consists in the preparation of a solution to serve as a vehicle, this being especially recommended for the administration of crystallized digitaline. It is made as follows:

℞ Glycerine . . . . . 133 grammes.
Distilled water . . . . 147 grammes.
Alchohol 95% . . . . q. s. to make a litre.

Every cubic centimetre of this solution represents 50 drops, so that the remedy may be administered in doses of $\frac{1}{50}$ of a milligramme. For example, digitaline could be ordered in the following manner:

℞ Crystallized digitaline . . . 1 gramme.
Glycerine-alcoholic solution q. s. to make a litre.

One drop of this solution is equal to $\frac{1}{50}$ of a milligramme of the active principle.

This method of administration presents several advantages. The solution or vehicle is somewhat viscid and consequently does not evaporate easily; it is stable and keeps for a long time.

THE LOCAL ANÆSTHETIC ACTION OF STROPHANTHINE AND OUABAINE.

Panas (*Archives d' Ophthalmologie*, March-April, 1890) draws the following conclusions from his clinical observations: 1. Ouabaine acts as an anæsthetic in the rabbit's conjunctiva, but has apparently no such effect in the human eye. 2. Strophanthine, though superior to ouabaine in anæsthetic properties, is so irritating in its effects on the human eye that it can not take the place of cocaine.

OIL OF PEPPERMINT IN THE TREATMENT OF "GRIP."

Dr. Charles L. Hogeboom, has had much greater success in treating grip when using full doses of oil of peppermint in addition to quinine, and full doses of bicarbonate of soda, than without it. He gives from five to ten drops three times a day, and sometimes more, till the worst symptoms subside. The disease may be assumed as microbic, although the germ has not been discovered. It is probably many times smaller than the typhoid bacillus, and, in consequence, may never be found.

The history of grip indicates a germ origin. It resembles, in many characteristics, other well-known germ diseases. He believes oil of peppermint to be a grip germicide. It acts with the greatest promptness and speedily dispels the most alarming symptoms, at least as far as my experience goes. The oil of peppermint is a powerful stimulant to the nervous system, particularly the vaso-motor, promoting regularity and decreased rapidity of the pulse, and relieving local congestion. It is the most diffusive of all the essential oils. These remarks are sufficient as hints to all practitioners who may care to make a trial of the remedy.—*Med. Rec.*

NITRITE OF AMYL IN CHLOROFORM POISONING.

Dr. E. Mammen, adds another case of chloroform poisoning treated successfully by the inhalation of nitrite of amyl. The facts are as follows: At about 7 P.M., Dr. M. received a message to come hastily to M. P——, who had taken chloroform and could not be awakened. The distance was about one and a half miles, and he stopped at a drug store to procure five-drop pearls of nitrite of amyl. Time of arrival was about half an hour after being called. He found the patient in a profound stupor, respirations shallow, pulse rapid and feeble. A three ounce bottle was found in his coat pocket, half full of Squib's chloroform. A telephone message to the druggist revealed the fact that he had purchased three ounces of the drug some two hours before. He had

swallowed apparently about one and a half ounce. Air was at once freely admitted to the room and to the patient, and a pearl of the nitrite given by inhalation. The effect was immediate and apparent. After the lapse of fifteen minutes, pulse again became rapid and feeble, and another pearl was used, with the result of deepening the respirations and increasing the vigor of the pulse. The same thing was repeated at lengthening intervals eight or nine times. Meanwhile, hypodermic injections of atropia were twice given, and towels wrung out of cold water dashed upon the chest. After four hours the patient awoke from his stupor, and in another hour was out of danger. Recovery was somewhat slow, owing no doubt partly to the great destruction of red blood-corpuscles, as evidenced by the extreme icteric hue of the skin, which persisted for two weeks. In my judgment this patient could not possibly have survived without the use of nitrite of amyl.—*Med. Rec.*

TREATMENT OF SWEATING FEET.

Dr. I. N. Bloom, at a meeting of the Clin. Soc. of Louisville, said that in a recent case, he had the patient bathe the feet in a solution of bichloride of mercury, 1 to 1000, morning and evening. After rubbing the surface carefully, so as to remove the dead epidermis macerated by the sweat, he directed the following course, which is partly original: A plaster sole, partly soaked in a bichloride solution, 1 to 1000, was put in the shoe. After drying the sole and placing it in the shoe, he sprinkled it with powdered boric acid. As regards the advantage of this method of treatment, there is much diversity of opinion. In this case the result was quite satisfactory. If this treatment were uniformly successful, it would point to a micro-organismic origin for the disease rather than a neurological. His experience has been too short to determine, but in many cases, especially of the lighter forms, it is of nervous origin. It is much easier to cure simple hyperidrosis of the feet than of the hands. Hebra's method, with diachylon ointment, is the only one promising any hope of success. He has tried many other means recommended by worthy men, but always had to return to the diachylon. The inconvenience of this latter method is great, but patients bear any treatment that will help to get rid of the disagreeable disease. This is especially true of women.

COCAINE IN SMALL-POX.

Drs. Luton and Ory recommend highly the internal use of cocaine in the treatment of variola, having tried it during a severe epidemic that raged in Algiers, in November, 1889. The good effect of the remedy was shown almost immediately by a lightening of the color of the eruption and disappearance of many of the papules without becoming purulent. Even in those cases in which the papules persisted for some time there was no suppuration. One of the cases in which the remedy was tried was one of black small-pox, from which the patient recovered. The cocaine was exhibited in a five per cent. solution, of which from ten to twenty drops were given every six hours. As no pustules were formed, there was no pitting.—*Med. Rec.*

MEDICINE.

THE WHITE CORPUSCLES IN DISEASE.

A very interesting communication upon this subject, by CASTELLINO, appears in the *Gazetta degli Ospitalli*, No. 4, 1891. The author has studied the matter for a period of three years, on over a hundred patients and his researches were made in a laboratory of Genoa. The following conclusions are put forth: 1. Along with the destruction of the red cells of the blood, there is an increase in the white globules in the following diseases, which are arranged in the degree of the number of said leucocytes: Pneumonia, erysipelas, scarlatina, pleurisy and typhoid fever. 2. These leucocytes rise in number with the temperature, and, except in the cases of erysipelas and pneumonia, begin to diminish *pari-passu* with the decline of the fever. 3. In these last two cases the white cells only begin to diminish several days after the crisis is over. 4. In acute infections there is a predominance of small white globules which are finely granular with one nucleus (the leucoblasts of Löwit). 5. In leuchæmia and chronic infectious diseases, such as syphilis, malaria and lead-poisoning, there is a predominance of the large leucocytes with coarse granulations, having many nuclei without nucleoli (erythroblasts of Löwit). Many of these granules answer to the chemical and microscopical tests of fatty substances.

A CASE OF ECHINOCOCCUS OF THE LUNG.

An interesting case of echinococcus in the upper lobe of the right lung, in a girl, aged 16 years, and of a family history of phthisis,

is reported by L. Revilloid (*Rev. Med. de la Suisse Romande,* Feb'y 20, 1891). The girl had always been delicate, having suffered from pleurisy when she was three years of age; when eight years old she had whooping cough, and shortly afterwards an area of dullness over the upper lobe of the right lung appeared and was diagnosed as tuberculous. The best hygienic measures were used in treating the patient, but notwithstanding these precautions, the dullness continued to spread until amphoric breathing appeared over the whole area of dullness in front and behind. Once, when apparently enjoying fair health, the patient was suddenly seized with suffocation and uncontrollable cough, which was followed by expectoration of large quantities of white viscid fluid. The expectoration continued for three-quarters of an hour and was followed by violent vomiting. The patient became very ill; the face and extremities were cold and blue, and collapse set in. On recovery from this, the temperature went up and the pulse increased to 130. The expectoration continued and the nausea was so great that no food could be retained in the stomach. Rectal alimentation was employed. Two days afterwards rigors, with cold perspiration, came on and the expectorated matters exhibited an excessive fœtor. Then over the area of dullness, physical exploration showed the presence of a cavity; amphoric breath sounds, râles and crepitation were marked. The patient, however, in such condition, did not present the aspect of a consumptive person, and the rare smell of the sputum was that of sulphuretted hydrogen. In the sputum, through microscopical examination, were found organisms in the form of hooklets, but no traces of tubercule bacilli. The diagnosis was clearly made then. In the course of time, all signs of the infectious disease disappeared and the patient made a final recovery. The treatment consisted of the administration of deodorants and the regulation of the patient's posture in order to insure the evacuation of the cavity. It was afterwards ascertained that the girl, when a child, associated largely with pet dogs, known to be suffering from tænia, and thus the presence of the echinococcus in the patient was explained. About nine months later the subject of this case was enjoying apparently the best of health, no symptoms of tuberculosis having been observed.

Eleven physicians have each found a better "lymph" than that of Koch.

THE VISUAL DISTURBANCES IN TABES DORSALIS; AN ATTEMPT AT A COMPREHENSIVE EXPLANATION OF THE SYMPTOM-COMPLEX OF TABES.

Berger (*Arch. of Ophthalmology,* xix, 4) has here presented a very interesting paper. He finds that tabes occurring in the earliest and latest periods of life are free from severe complications. Tabes in syphilitic cases generally begins with cerebral symptoms and in non-syphilitic cases with spinal symptoms. Slight drooping of the upper lid increases from the beginning of the tabes up to the paralytic stage. When the lids of a tabetic patient are closed after a few seconds, fibrillar twitching is seen in the orbicular muscle of the lid. There is no marked difference in the relative frequency of inequality of the pupils in the different stages of tabes; it is slightly more frequent in the initial stages. A trace of pupillary reaction to light may be preserved for a long time, and this reaction disappears undoubtedly earlier than the reaction to irritation of the skin. Berger accepts Mauthner's explanation of the immobility of the pupil in tabes—that the fibres of the pupillary light reflex, lying in the wall of the third ventricle, suffer from a chronic ependymitis and a consequent sclerosis. Paralysis of accommodation becomes the more frequent the more advanced is the disease. As a rule, paralyses of the exterior ocular muscles are found disproportionately oftener in cases showing optic atrophy than in cases not thus complicated. Between the cases of optic atrophy with paralyses of the ocular muscles and those without such complications there is no special difference as regards the duration of the affection before blindness ensues. Most of the optic atrophies develop in the pre-ataxic stage; but should such atrophy develop later, blindness will follow the sooner the more advanced is the tabes. No relation exists between the contraction of the visual field, the color-fields, the disturbances of central vision, and of color-perception in tabes. Contraction of the outer portion of the visual field is most frequent, though it may occur in its upper portion. Syphilitic patients show a greater tendency to permanent paralyses of the ocular muscles than non-syphilitic patients, owing to the fact that they are more subject to multiple paralyses. Berger draws the following conclusions: Many of the symptoms of tabes may be explained by a lesion of the nerve nuclei in the fossa rhomboidalis and its continuation into the aqueduct of Sylvius. The dif-

ficult closure of the lids may be explained by a slight functional disturbance of the upper nucleus of the facial nerve. The myosis is paralytic, caused by paralysis of the vaso-constrictors in the medulla. The reflex iridoplegia is caused by a legion of the fibres running in the wall of the third ventricle to the nucleus of the sphincter pupillæ. The diminished intra-ocular tension sometimes found is the result of the lowering of the tone of the vessels. The lacrymation in tabetic patients is a vaso-motor neurosis. The sympathetic nerve is not the cause, but the medium by which certain ocular symptoms of tabes are carried from the central nervous system to the eye. In tabes it may be said in general that the nerve nuclei in the medulla nearest the median line suffer more frequently than those farther outward. An affection of the medulla is indicated by the development of diabetes mellitus in tabes, and in this manner may, perhaps, be explained the febrile symptoms which are sometimes met with in tabes. It is unnecessary to assume the existence of hæmorrhages in the central fibres and in the nuclei in order to explain the transitory paralyses of the ocular muscles which come on in the beginning of tabes. We know that the antero-lateral tract, which connects the degeneration zones of the medulla with those of the cord, contains vaso-motor fibers, and it has been proved that the lesions of the cord, especially in tabes, correspond in extent to the vasculas zones. It may be concluded from the functional disturbances of the optic nerve that vascular changes alone cause the disturbances, and the assumption is admissible that the functional disturbances of the vascular regions of the optic nerve and posterior columns of the cord are caused by a disease of the nerve centers in the fossa rhomboidalis, resulting from an ependymitis of the medulla.

Berger's experimental investigations, in which he cut different parts of the medulla, shows that: 1. Nystagmus may develop. 2. Mydriasis as well as myosis may appear. 3. As a result of injury to the medulla, hæmorrhages are found in particular vascular regions of the cord. 4. After injury to the medulla, changes in the retinal vessels may come on.—*N. Y. Med. Jour.*

REFLEX PAIN IN REMOTE REGIONS AN EVIDENCE OF INTERNAL HEMORRHAGE.

In 1880, a German, aged fifty-nine, while engaged in playing chess with Dr. H. Engel complained of an excruciating pain in his left knee, which had developed a few hours before and gradually became more intense. He had never suffered with rheumatism or neuralgia of any kind, never met with any injury, and never felt any pain in that knee. An examination gave no result: there was neither redness, swelling, nor tenderness. He went home promising to use certain anodynes as directed by me. Late in the night Dr. E. was sent for, the pain not having diminished. A hypodermic of morph. sulph., one sixth grain, gave no relief, and it was followed fifteen minutes later by a second injection of one-fourth of a grain, and the pain became less severe. The next day the pain remained about the same; he refused another hypodermic, and a blister applied at 11 A.M. Otherwise his health was undisturbed, there being no symptom or sign of any other morbid condition. Dr. E. was informed later, that the pain subsided somewhat about five o'clock in the afternoon, probably from the effect of the blister still covering the spot. A few minutes before 6 P.M. the pain again became suddenly intense; he expressed a desire to use the commode, and while sitting upon it he was seen to fall forward. An immense hemorrhage, extending over the entire base of the brain, had caused the fatal issue before Dr. E. reached him an hour later.

An Israelite, aged sixty-three, remarkably active and healthy-looking, while visiting, on the afternoon of December 14, 1884, a lady with whom he had been very intimate for years, complained of a severe pain in the left leg, a little below the knee. This pain became so severe that a neighboring physician, a homœopath, was sent for. He had the patient go to bed and administered various internal remedies. At about 9 P.M. the pain became easier, when suddenly all the symptoms of the classical apoplectic seizure developed. In this state he was removed to his home, where Dr. E. saw him about 11 P.M. Venesection, the application of croton oil to his tongue, and the internal use of tartar emetic caused him to regain consciousness; but when Dr. E. saw him the next morning his temperature was 102° and the fatal issue seemed imminent. Later in the day the hæmorrhage recurred and he died the same night.

October 11, 1886, a man of fifty-three consulted Dr. E. about a severe pain in his back. The closest examination failed to reveal its cause. It was not lumbago, for no movement of any kind augmented or diminished the pain. After several days of fruitless

medication a blister cured it. The man then remained well for three months, when the same pain suddenly returned while he was at his home on the night of January 16th. Nothing seemed to give relief, and a little after 5 A. M. death occurred from cerebral hæmorrhage.—*Med. News*, March 28, 1891.

SURGERY.

STRICTURE OF THE MALE URETHRA.

Dr. J. William White, in the *University Medical Magazine*, gives his views in an able manner as to the treatment of this condition. The following are his conclusions:

1. Strictures of large calibre, that is, of more than 15 French, situated at or behind the bulbo-membranous urethra, are to be treated almost without exception, by gradual dilatation.

2. Strictures of large calibre occupying the pendulous urethra are to be treated by gradual dilatation when very recent and soft, and by internal urethrotomy when of longer standing, distinctly fibrous in character or non-dilatable. It is to be remembered that the great majority of so-called strictures of large calibre of the pendulous urethra are merely points of physiological narrowing.

3. Strictures of the meatus and of the neighborhood of the fossa navicularis should be divided upon the floor of the urethra whenever it is evident that they are real pathological conditions producing definite symptoms and not normal points of narrowing.

4. Strictures of small calibre (less than 15 French), situated in advance of the bulbo-membranous junction, unless seen very early and found to be unusually soft and dilatable, furnish the typical condition for internal urethrotomy, which should be done preferably with a dilating urethrotome and, invariably, with all possible antiseptic precautions.

5. Strictures of small calibre (less than 15 French), situated at, or deeper than, the bulbo-membranous junction, should be treated whenever possible by gradual dilatation. In a case of resilient, irritable or traumatic stricture in this region or of stricture which, for any reason (as the occurrence of rigors), is non-dilatable, external perineal urethrotomy is the operation of choice.

6. Strictures of the deep urethra, permeable only to filiform bougies, should be treated by gradual dilatation when possible, the filiform being left *in situ* for some time, and followed by the introduction of others, or used as a guide for a tunneled catheter. If the stricture be not suitable for dilatation, external perineal urethrotomy should be performed.

7. Impassable strictures of the deep urethra always require the performance of perineal section.

IS CANCER OF A POISONOUS NATURE?

Prof. Adamkiewicz, of Krakau, read a paper before the Royal Academy of Sciences at Vienna (*Deutsche Med. Zeit*), on the above subject. After formulating the following questions, he reaches the conclusions given below in reply thereto:—

1. Is it, in the first place, possible to demonstrate any poisonous property of cancer-tissue, no matter how developed, upon the animal organism?

2. Is the activity of the cancer-poison upon the animal dependent on the location of the site of inoculation?

Experiments upon rabbits have so far furnished the following answers:—

1. There is a poison in recently-removed and unchanged carcinomatous tissue.

2. This poison can kill animals in a few hours.

3. It acts only on the nervous system, and death is caused by paralysis of the brain.

4. Boiling heat and disinfectants (carbolic acid, etc.) destroy the activity of this cancer-poison.

5. The micro-organisms which are constantly to be found in cancerous substance and at the site of inoculation do not, however, seem to be the carriers of this cancer-poison.

6. By transplanting cancer-tissue upon a favorable soil, the latter also acquires poisonous properties; it cannot be stated definitely to what extent the micro-organisms are concerned in the production of these properties, which develop on this soil at the same time.

7. No other living tissue, whether of physiological or pathological origin, possesses (as far as can be determined from his experiments) the poisonous properties of cancer.

8. This poison has been found only in true carcinomas; in sarcomas and adenomas he has not yet been able to prove the existence of such a poison.

9. The action of the poison is so rapid that it may be of value as a means of rendering evident the cancerous nature of a pathological growth.

10. Tissue from the cadaver possesses a poisonous action very analogous to that of carcinomatous substance; this analogy is so great that it may be positively stated that malignant growths produce during life a material having an action similar to that of the poisons from the cadaver.

Adamkiewicz intends to produce the proofs of these conclusions in a more extended form. —*Memphis Med. Monthly.*

TREATMENT OF ABDOMINAL CONTUSIONS PRODUCED BY HORSE KICKS.

From an interesting study of the treatment of abdominal contusions produced by horse-kicks, Moty (*Arch. de med. et de Chirurg. nulit*, Feb'y and March, 1891) arrives at the following conclusions: 1. In one-third of the cases abdominal contusions of the origin indicated are accompanied by serious intestinal lesions. 2. The diagnosis of perforation is impossible. 3. The best method to use in the treatment of intestinal wounds is the direct union by means of sutures. Even if peritonitis exists, intestinal suturing and laparotomy can be practiced. 4. Meanwhile, an exploratory laparotomy is not indicated, and in the case of doubt, medical treatment alone should be resorted to. 5. In regard to prognosis, this should be withheld for about a month, for subsequent complications may arise as a result of a latent contusion of the mucous membrane.

TREATMENT OF GLEET AND SEXUAL NEURASTHENIA BY MEANS OF METALLIC BOUGIES.

Dr. Charles Szadek, of Kieff, Russia, in the *Atlanta Medical and Surgical Journal*, refers to the extraordinary difficulty of healing some cases of gleet is well known. There are men who have every morning an exudation, although they have tried every possible remedy against the evil. Frequently, especially after coitus or excess in sacco, the chronic disease becomes acute, which often leads to disagreeable results.

The product of the chronic inflammation of the urethra is an infiltration of the cells of the diseased mucous membrane; the infiltration gradually becomes fibrous tissue, which, in its turn, produces the cicitrization called stricture; the upper cells of this stratum, constantly sloughing, exfoliating and mingling with the mucous secretion of the glands, constitute the exudation which characterizes chronic gonorrhœa (gleet); the glands and lacunæ of the urethra are also affected. It is clear that many chronic gonorrhœas already represent the first stages of stricture, or, as Otis calls them "large sized strictures," which naturally cannot be cured by astringent solutions, or even such as are fatal to gonococci. If they are to be cured local pressure must be used to remove the cell infiltration, while medical treatment is adopted to affect the catarrh. For these reasons treatment with metallic bougies against chronic gonorrhœa has been mostly practiced.

In four years (1887–1890) I have treated fifty (50) cases of inveterate gleet with most satisfactory results, by the introduction into the urethra of Beniqué's duly curved tin bougies, anointed with either Unna's

Ol. cacao	1,0
Ceræ flavæ	2,0–5,0
Bals. Peruv	2,0
Arg. nit	1,0
M.; f. ung.	

Or Sperling's Salve:

Lanolini	20,0
Ceræ albae	4,0
Arg. nit	0,1–0,3
M.; f. ung.	

These bougies are slightly conical and eleven centimeters in length. In nervous or very sensitive subjects, in whom the assertion of the bougies gives rise to pain and erection, from 3 to 5 per cent. solution of cocaine should be previously injected into the urethra; during the first sitting the bougie is left *in situ* not longer than for three or five minutes, but later on the duration of the sittting is gradually increased up to fifteen or twenty minutes. The sittings are repeated every two or three days, except in very inveterate and atonic cases, in which a daily introduction of the instrument is advisable. I have used a set of the bougies from No. 18 to No. 30 charriere, commencing with the least irritating bougies and gradually ascending to even larger ones. In relatively recent and in old cases I have usually employed Nos. 22, 24 and 25, while in more severe and protracted ones (which, by the way, constitute a vast majority) I have passed, following Professor Otis's instance, by degrees to No. 28 or even No 30. In patients with narrowed ureter, I have enlarged the latter by means of a bistoury. In such cases where the lesions are situated in the bulbous or the posterior division of the urethra, his bougies should be introduced even as far backwards as the bladder; according to my experience, the deep insertion, when practiced with due caution and carefulness, never causes any untoward accessory effects (such as vesical or urethral irritation, urethral fever, etc.). The therapeutic results which I have obtained with this treatment are sat-

isfactory. My fifty cases of gleet, which were treated after the mechanical method in five cases of urethritis posterior, complicated with obstinate vesical affection, the results were far from being satisfactory; but in the remaining forty-five the treatment by metallic bougies proved highly successful. In thirty of the fifty cases a complete cure ensued; in another case a considerable improvement was obtained, and the only symptom left was a scanty mucoid discharge recurring from time to time. In relatively recent or in old cases from four to eight sittings proved to be sufficient for effecting cure. In a majority of cases, however, two or three months' course was necessary for the purpose, while in some unusually severe case, complicated with multiple strictures where a relapse took place, another course was to be repeated some months later.

The same method in the shape of the insertion of Nos. 20 to 30 gave to me most gratifying results, also, in fifteen cases of sexual asthenia, with spermatorrhœa and incomplete sexual impotence.

I arrive at the following general conclusions:

1. The method under consideration proves very useful; in many cases of neurasthenic irritation of the urethral mucous membrane, and in many cases of inveterate gleet, especially in those characterized by infiltration and other morbid changes in the mucous membrane and submucuous tissues.

2. It proves beneficial further in inveterate gleet of an atonic character, or in that kept up by local nervous disturbances.

3. In some cases, however, the mechanical treatment must be supplemented by a subsequent course of local astringent remedies.

4. The method is freé from any untoward accessory effects; provided, it is practiced with due precautions.

THE TREATMENT OF VARICOSE ULCERS.

Dr. J. Braun states that a large experience with this class of cases has convinced him of the superior advantages of a 10 per cent. ointment of zinc in lanoline (zinc oxid. 15.0, lanoline 110.0, ung. emoll. 40.0). This is applied as follows in cases of ulcer of the legs: The surface of the ulcer is thoroughly washed with luke-warm water, carefully dried with a compress, and the salve spread on a soft piece of linen applied to the sore and retained by a handkerchief or strip of linen. The patient remains in bed until the sores have cicatrized. The good effects of this treatment soon become apparent, the pains and itching disappear, and the profuse watery secretion is arrested, the greater part of the transuded fluid being absorbed by the lanolin which has hygroscopic properties. The ointment forms a protective covering under which healing takes place, while the lanolin by virtue of its antiseptic powers prevents decomposition of the secretions. In cases of unhealthy ulcers, the application should be renewed four or five times daily for the first few days. After three or four days, the surface of the sore will be found much cleaner, and cicatrization will have occurred at the margins, and then the ointment need only be applied three times daily. Once a day, and preferably in the morning, the ulcer should be irrigated with luke-warm water and dried, and before each application any remaining secretion is removed with absorbent cotton. Since employing this treatment the author has not found it necessary to resort to skin transplantation.—*Allg. Wien. Medizin. Central-Zeitg.*

GYNÆCOLOGY.

MEDICATED PENCILS FOR ENDOMETRITIS.

Terrier (L'Union Médicale, Jan'y 8, 1891) uses the following combination for the preparation of medicated pencils:

℞

Powdered iodoform	10 grammes.
Tragacanth gum	9.50 "
Glycerine and distilled water each q. s. to make 10 pencils	

These pencils are recommended in the local treatment of simple endometritis, when direct exploration of the uterine cavity and dilatation are not necessary. The iodoform may be replaced by salol or resorcine in the same doses. If it is desired to use the bichloride of mercury, the pencils may be prepared in the following way:

℞

Bichloride of mercury	0.50 grammes.
Pulverized talc	25 "
Tragacanth gum	1.50 "
Glycerine and distilled water each q. s. to make 50 pencils.	

The vagina should at first be thoroughly washed and disinfected with a one thousandth solution of the bichloride of mercury, after which the pencils are to be introduced into the uterine cavity and retained there by the aid of iodoform or salol tampons.

TREATMENT OF FISSURED NIPPLE AND ENGORGED MAMMARY GLAND.

Dr. Barton Cooke Hirst, in a recent number of the *University Medical Magazine*, says: In the treatment of fissured nipple,

when the cracks are at all extensive, the ordinary remedies recommended from time to time have been found more or less unsatisfactory. Painting with tincture of benzoin, for instance, while an excellent procedure for small superficial cracks of the nipple, is perfectly worthless in more advanced cases.

The writer has found in hospital and private practice that excellent results can be secured in bad cases by the application of an ointment made up of equal parts of castor oil and subnitrate of bismuth. This mixture makes a very smooth, soft ointment, which relieves the pain, and is an excellent protective to the part. Before application, the nipple and surrounding skin should be carefully cleansed and disinfected, and then the ointment should be smeared on plentifully. If it is necessary for the child to nurse from the affected nipple, it can be allowed to do so without the necessity of removing the ointment from the nipple, as must be done if tannic acid or the salts of lead are used. This is a serious disadvantage of many forms of treatment recommended for fissured nipple, for the irritation of removing the substance employed as a local sedative neutralizes its action.

For the engorgement and pain in the mammary gland itself, which so often accompanies fissured nipple, the writer has had excellent results from the use of an application of lead water and laudanum, which is applied by means of a cloth covering the whole breast, renewed at frequent intervals, and kept in place by a suitable mammary binder, either that recommended by Richardson or the Murphy bandage. This not only retains the dressing, but supports the breast and exercises even pressure upon it. With this treatment the development of mammary abscess is a rare event. If the child can be nursed from the other breast alone, it is safer, I think, to draw the milk from the affected gland by means of a breast-pump, until the cure is almost complete. If it is necessary that the child should nurse from the cracked nipple, a glass nipple shield with a rubber tip must be employed.

TRENDELENBURG'S POSTURE IN LAPAROTOMIES.

The advantage of Trendelenburg's method of pelvic elevation in suprapubic operations upon the bladder has been generally recognized by surgeons. In a recent number of the *Centralblatt für Chirurgie*, Dr. Leopold states that an experience of several years has convinced him of the value of this posture in intra-abdominal operations on females, for diseases of the uterus, ovaries and tubes. By elevating the pelvis the intestines are caused to gravitate toward the diaphragm, and the pelvic organs are thus rendered much more accessible to operative procedures. As is well known the protrusion of the intestines into the wound is frequently a source of delay and danger in laparotomies; they get in the way of the operator, and are apt to be wounded. Aside from this, the posture affords an excellent view of the pelvic viscera, enabling us to recognize the presence of adhesions between the uterus and rectum or bladder; to diagnose the different forms of salpingitis and ovarian disease, and to determine the relative position of the organs. In operations before a class of students, the latter are enabled to follow the different steps of the procedure much more readily than when the woman is in the ordinary position. It is often a source of disappointment to those witnessing a laparotomy that many of the details of the operation escape observation, but Dr. Leopold assures us that by the employment of this posture, many important points in the technique, such as the manner of ligating the pedicle and the application of the sutures can be noted.—*International Journal Surgerg.* .

HÆMOSTYPTICA.

Fritsch (*Therapeut. Monatshefte*, January, 1891) states that in common with all gynæcologists he uses ergot frequently in his gynæcological work. In obstetrical practice he rarely has occasion to employ it. For a long time he gave the drug in pill form as follows:

℞

Powder of ergot	80 grains.
Tragacanth	q. s.

Make 60 pills.
Take ten pills daily.

In practice among poor patients this is a desirable formula on account of its cheapness. For more prompt action he uses the following prescription:

℞

Powdered ergot	10 drachms.
Alcohol	20 drachms.
Sulphuric acid	2 drachms.
Warm water	4 pints.
Digest to	1 ½ pints.
Filter and add syrup of cinnamon	4 ounces.

Take two tablespoonsfuls three times daily.

This preparation of ergot, though very effective, will disagree with the stomach and cannot be taken continuously,

Fritsch then advises the use of Denzel's ergotine in the following combination.

℞ Ergotine (Denzel) } of each.....80 grains.
Powdered ergot }
Make 100 pills.
Take six pills daily.

In this way ergot may be given with excellent effect for a long while.

In cases of menorrhagia the following is advised:

℞ Dried extract of hydrastis canadensis }
Dried extract of gossypium } of each 80 grains.
Ergotine (Denzel) }
Make 100 pills.
Take three pills three times a day.

In the form of suppositories ergot seems to be of little value.

A tincture may be made on the plan of the decoction given above, of such strength that one drachm will contain eight grains of ergot. Of this two tablespoonfuls may be given daily. Fritsch calls this *tinctura hæmostyptica.*

This tincture is very effective, especially in menorrhagia after labor, at the climacteric and in profuse menstruation of the very young. This remedy should always be tried before any operative measures are undertaken for the relief of menorrhagia.—*University Med. Magazine.*

SEXUAL LIFE OF WOMEN AFTER CASTRATION.

At the Berlin Medical Congress, Dr. F. Deppler, of Venice, read a paper embodying the results of a study he had made in the cases of ovariotomy performed by himself. He had performed castration forty-six times, obtaining a cure in thirty-nine. These operations were performed for the relief of purulent or gonorrhœal salpingitis, oöphoritis, fibroid tumors of the uterus, etc. The following were his conclusions, derived from a study of the physiological consequences of these operations: 1. When the operation was performed on account of salpingitis or other inflammatory process, uterine hæmorrhage never occurred subsequently. 2. The conjugata became gradually shortened, and this was the more marked the younger the individual was when operated upon. 3. The uterus became atrophied, the vagina grew shorter and narrower, its mucous membrane became paler, and the labia majora were somewhat thinned. 4. The breasts grew smaller, acquiring a strong resemblance to the male mammæ. 5. The brown pigmentation of the nipple, areola, perineum, and annus disappeared wholly, as did also pathological pigmentation existing in some of the cases; the hair also turned white. 6. The tendency to embonpoint, which is generally believed to exist after these operations, was not observed by the author. 7. No changes were observed as regards the growth of the hair or the tone of the voice. 8. The sexual desire remained, and was the more pronounced the earlier in life the operation was performed. 9. The operation offers no impediment to marriage; three of the author's cases had married and had lived happily with their husbands for years. 10. A marriage with a castrated woman is the ideal Malthusian marriage, and the only way the Malthusian idea can be carried out without endangering the health and happiness of the woman. 11. In the cases operated upon in early life for inflammatory conditions, no neuroses were seen to develop, which was not the case when women were operated upon late in life for fibroid tumors of the uterus. 12. A favorable influence upon the hæmorrhage was observed after operation for myoma, yet in no case did the menopause at once set in. 13. In cases of operation for uterine fibroma, the patients, even those in full maturity, lost all sexual inclination after the operation.—*Medical Press and Circular.*

OBSTETRICS.

INDICATIONS FOR OPERATION IN ECTOPIC GESTATION.

Dr. C. A. L. Reed, of Cincinnati, Ohio, contributed a paper to the *Southern Surg. and Gyn. Assoc.*, on this subject.

The paper starts with the assumption that the only proper treatment of ectopic gestation is by laparotomy, or, more properly, cœliotomy. While the profession has become practically unanimous that this is the proper line of treatment, the indications for operation have been less definitely decided upon. This conviction is forced upon the observer, not only by a study of the literature of the subject, but by encountering cases which have been advised against operation by their attending physicians, until hæmorrhage within the pelvis has threatened a fatality, which is but too frequently realized. The most legitimate excuse for this dilatory practice is to be found in the confusion which has arisen with regard to the supposed uniform causal relationship of ruptured ectopic gestation to pelvic hæmatocele, and the division of the latter into "primary" and "secondary" rupture. These terms are unfortunate, and, as used in this connection, may be entirely arbitrary. Primary rupture is made to mean rupture beneath the peritoneum, instead of first rupture, as the etymology of the word would

imply, while secondary rupture is made to mean rupture within the peritoneum, instead of "second" rupture; whereas an intra-peritoneal rupture may be, and frequently is, a primary rupture, when spoken of with reference to the sequence of events in ectopic gestation. There would be no serious confusion here if we were not also taught to leave extra-peritoneal hæmatoceles alone, to be taken care of by absorption, and if we did not add that, as these hæmatoceles are generally caused by ruptured ectopic gestation sacs, we are to relegate these cases also to the expectant plan of treatment. This conclusion is without warrant, and is responsible for hundreds of deaths annually from this one cause.

The treatment of ectopic gestation premises the diagnosis of this condition. This is obviously difficult, and in the majority of instances cannot be arrived at at all, or, if at all, only presumptively. But in all these cases conditions can be found in the pelvis, which, if not conclusive of extra-uterine pregnancy, yet constitute conclusive indications for exploratory operation. The presumption of ectopic pregnancy can be arrived at before rupture, chiefly by a history of previous sterility, by a previous amenorrhœa, followed after a few weeks by irregular hæmorrhage, by increased tumefaction at each side, or behind the uterus, and by the existence of false decidua within the uterus. The latter fact may be safely determined by the judicious use of the Emmett curett forceps. The diagnosis after rupture is essentially the diagnosis of internal hæmorrhage. Time wasted either to determine the cause of that hæmorrhage, or to find out whether it be primary or secondary, is criminal. The thing to do is to cut down and operate. The position has been taken that time should be taken for the patient to rally from the shock. One of Dr. Reed's own cases died simply because he waited twelve hours for reaction—a lesson which taught him the fallacy of the old teaching, and which has since saved lives at his hands. The best way to overcome shock from internal hæmorrhage is to stimulate the patient by giving ether, stop the drain by ligating the bleeding vessels, and arouse the nervous system by washing out the belly with hot water.

What shall be done with the appendages on the other side? In view of the fact that tubal pregnancy generally depends upon desquamative salpingitis, as confirmed by the recent observations of Formad, before the American Association of Obstetricians and Gynæcologists, and in view of the fact that this disease is almost uniformly bilateral, the question is at once raised, "Is the woman liable to an ectopic pregnancy on the other side?" Herman, in the *British Medical Journal*, September 27, 1890, reports such a case; and Tait reports another, with death from rupture of the second conception. Leopold Meyer reports another, and refers to verified cases by Veit and Olshausen. There are now at least ten cases on record. From this Dr. Reed concludes that if the patient's condition at the time of the operation is such as to justify further interference, the appendages from both sides should be removed.

He submitted the following conclusions:

(1.) The only proper treatment of ectopic gestation is that by abdominal section.

(2.) The operation should be done in cases before rupture as soon as the condition can be presumptively diagnosed.

(3.) The operation should be done in cases after rupture, as soon as the evidences of internal hæmorrhage become apparent.

(4.) In cases in which the period of viability has already been reached without rupture, pregnancy should be allowed to advance to term before operation, but only under the closest possible vigilance.

(5.) In all cases the appendages from both sides should be removed, providing the condition of the patient will justify the extension of the operation.—*Ann. Gyn. Pæd.*

THE TREATMENT OF ECLAMPSIA.

Dr. Barton Cooke Hirst (*Ann. Gyn. Pæd.*) in considering the various methods employed in the treatment of eclampsia, says that he believes that a careful analysis of the different plans of treatment will award the palm to chloral, with diaphoresis and catharsis, anæsthetization and occasionally venesection. Morphia, it is true, gives the best record—3.3 per cent.—but this was in the hands of a single individual, and his report would be more impressive were it more exact. Thus, he says that in "more than thirty years" he has had "more than sixty cases of eclampsia." In that period one's memory could easily play him false, both as to the number of cases and the results. Chloral, on the other hand, has achieved brilliant results in different hands and places. He should like to see veratrum viride more extensively tried, and would be glad to unite with others holding hospital positions to give it a thorough test under favorable conditions. He believes the results would be excellent—would, perhaps, challenge those of chloral. But as the case

stands at present, it seems to me that the conscientious physician must depend upon chloral, at least in private practice, until the equality or superiority of some other plan of treatment is proved. Perhaps a combination of chloral and veratrum, one by the bowel, the other hypodermically, will give better results than either remedy alone. This he intends to test at the first opportunity.

PÆDIATRICS.

INSOMNIA IN INFANTS.

Dr. Jules Simon considers insomnia a symptom of much importance in infants. In many diseases it is a sympton of minor importance, and of no special interest. In others it is one of the chief manifestations of the disease. The influence of dentition has been greatly exaggerated. Unless congestion of the gums or surrounding parts is present, it causes but little disturbance of the sleep. Dyspepsia and indigestion are the most common and universal causes of disturbed sleep, even without the definite symptoms of vomiting, diarrhœa, or marked constipation. A discussion of the treatment would involve a review of the whole subject of dietetics. Causes referable to the nervous system probably occur next in frequency. All young infants may, even in the first year, present evidences of acute cerebral congestion. Extremes of either cold or heat may produce the same result. A child that has been exposed to a strong wind during its daily airing, or one that has had insufficient protection from the sun, may pass a restless and uncomfortable night. This condition must be distinguished from the insomnia of meningitis which, in some cases, is for many days the only sign. In older children, headache due to overtaxing of the brain is not uncommon. Anæmia and rapid growth, in conjunction with over-study, is a fruitful cause of insomnia. In children of rheumatic parents this tendency is especially marked. Among nervous causes in these older children, hysteria, chorea, and epilepsy are the most common. The young hysterical subject is always liable to insomnia, with or without headache. Some attribute all headaches of this period to hysteria, but the author believes that the distinction should be carefully made between such headaches and those due simply to rapid growth and over-study. The insomnia of epilepsy is peculiar to itself, and is sometimes the only symptom for a considerable period. The child suddenly wakes from profound sleep, sits up, and begins to cry, but soon lies back, as if exhausted, and falls into a deep sleep. These attacks are always accompanied by incontinence of urine. Insomnia complicating chorea is an exceedingly grave symptom. Earache is always accompanied by insomnia, and usually by continuous crying. Hernia is a cause of pain and sleeplessness that is frequently overlooked. Intermittent fever is in some cases marked by wakefulness at a definitely recurring period. Insomnia and headache are prominent and early symptoms of albuminuria.—*New York Medical Journal.*

DIAGNOSIS OF TUBERCULOSIS IN CHILDREN.

In the March No. of the *Rev. Mens. des Malad. de l'Enfance,* M. Mirinescn calls attention to the existence of enlarged lymphatic glands in various parts of the body, such as the axilla, groins and others, as affording great assistance in making the diagnosis of phthisis in children, especially in doubtful cases. If the child is in an emaciated and weakened condition, and there are no superficial lesions to explain the enlargement of the glands, it may be inferred that tuberculosis is present. Out of sixteen cases of this nature examined, the glands of fifteen were found, by experimental inoculations, to be tuberculous. This "peripheral polyadenitis" as the author terms, it, may be observed in children as young as fourteen or fifteen months.

THE ANTIPYRETIC TREATMENT OF FEBRILE AFFECTIONS OF CHILDREN.

In the yearly report of the Children's Hospital of Berne, Professor Demme publishes a number of rules as to the selection of antipyretic measures in the treatment of various febrile affections in children, and his results, which are exceptionally valuable, in that he has rich experience, are published in the *Wiener Medizinische Blätter* for January 1, 1891.

In the first place, Dr. Demme maintains that he is firmly convinced that, in children, febrile affections, with moderate fever, from 100° to 101° F., are best treated without any antipyretics whatever in the way of therapeutics, and that the febrile symptoms may be best controlled by cloths wet in cold water and wrapped around the trunk. His experience, he states, has taught him that such moderate febrile temperatures, with the accompanying nervous excitement and restlessness and the insomnia, or still more alarming profound somnolence, can be more

satisfactorily overcome by baths of from five to ten minutes' duration each, administered twice daily, the temperature of the water being from 79° to 82½° F. When, however, the temperature reaches 104°, and remains at this elevation, then antipyretics are necessary, although the author shows that there is the greatest choice in the selection of a suitable remedy for this purpose. Regard must not only be paid to the elevation of temperature alone, but also the character of the morbid process and the condition of the patient's strength must come into consideration. His experience, he states, has taught him that typhoid fever, acute articular rheumatism, and broncho-pneumonia of asthenic type best respond to the antipyretic therapeutics. He rarely, however, employs them, or only exceptionally when compelled to, in diphtheria, in the acute exanthemata, such as scarlet fever and measles, and in simple croupous pneumonia. What was said above as to the employment of baths alone applies also to the combined employment of antipyretic drugs and baths. He only recommends the employment of baths when the temperature of the body is reduced during its administration in extremely rare cases and only when there is an alarmingly high temperature. In the large majority of cases, luke-warm baths, of the temperature above referred to, more or less prolonged in administration, will give much more satisfactory results. In cases where the soporific symptoms are especially marked, and where there is deep red or light cyanotic color in the face, luke-warm baths may be used and are better taken at about 40° F., poured over the head and neck. As regards the selection of the individual antipyretics, in addition to the general observations already given in every case of acute articular rheumatism, when the condition of the digestive organs permit it, he uses the salicylate of sodium, or, where there is a tendency to vomiting or diarrhœa or serious objection to the taste, he substitutes for it salol. Of the salicylate of sodium, the following are the doses to be administered in twenty-four hours: For children from 2 to 4 years of age, 7½ to 15 grains; for children from 5 to 10 years of age, 15 to 30 grains; for children from 11 to 15 years of age, 30 to 45 grains. The following are the doses recommended of salol: For children from 2 to 4 years of age, three times daily, a powder of 4 to 5 grains; for children from 5 to 10 years, three to four times daily, a powder of from 7½ to 12 grains; for children from 11 to 15 years of age, three to four times daily, a powder of 12 to 15 grains; and in typhoid fever he has found the greatest satisfaction upon the employment of thallin, administered in the form of sulphate, giving it every two hours to children from 3 to four years of age in doses of ½ grain; from 5 to 10 years of age, in doses of ¾ grain; 11 to 15 years of age, in doses of ½ to ⅝ grain. In cases of broncho-pneumonia, where the temperature may often reach 106°, antipyrine is the remedy which Dr. Demme recommends, giving it dissolved in large quantities of water, with the addition of a little sugar and a few drops of brandy. In this mode of administration he claims that disturbances of the appetite or vomiting will be entirely avoided. He states that this remedy has rarely failed to give him satisfactory results where he has attempted to produce marked reduction of temperature, notwithstanding cases of broncho-pneumonia, or in the acute exanthemata, or even in malignant diphtheria, and he consequently prefers it to any one of the other antipyretics. He recommends the following doses, to be taken at hourly intervals: For children of from 2 to 4 years of age, 3 to 6 grains; from 5 to 10 years of age, 7 to 12 grains; 11 to 15 years of age, 13 to 15 grains. Of course, when the antipyretic effect commences, this dose must be diminished, while larger doses are, according to the author, never required. In cases of broncho-pneumonia in children, where hectic fever sets in, with high evening exacerbations and morning remissions, antipyrine, or any of the aromatic order of antipyretics, will be of value. The dose which he then administers is, for children from 11 to 15 years of age, 12 to 15 grains; although the author, as seen, gives the preference to antipyrine as an antipyretic, he nevertheless refers to acetanilide and antifebrin as likewise, in cases of erysipelas and acute rheumatism and pulmonary tuberculosis, satisfactory antipyretics, while antifebrin possesses the advantage over antipyrine in more seldom leading to the production of exanthematous eruption.—*Therap. Gaz.*

STATISTICS AND TREATMENT OF DIPHTHERIA.

Statistics as to the cases of diphtheria and croup treated in the Children's Hospital of Pesth are given by Dr. Johann Bokai (*Wien. med. Woch.*, No. 10, 1891) for the years 1889-90. There were 447 cases of diphtheria, and 32 of "primary laryngeal croup." Post-diphtheria palsy was noted in 10 per cent. of the cases. The mortality

among the 447 cases of diphtheria, of whom one quarter were under three years old, was 234 (54 per cent.); in 170 cases the larynx was not affected, and the death-rate in this class was only 23 per cent. Laryngeal croup occurred as a complication of faucial diphtheria in 237 cases; 53 cases recovered, 32 without, and 21 after, tracheotomy, which was performed 159 times. In the group of 32 cases of uncomplicated laryngeal croup, 16 cases recovered; 7 without, and 9 after, tracheotomy, which was performed 23 times. The treatment adopted in pharyngeal diphtheria was the internal administration of chlorate of potassium, gargling with lime water, and painting two or three times a day with a 5 per cent. solution of perchloride of iron in glycerine, which Bokai believes prevents the occurrence of laryngeal complications. After tracheotomy steam inhalations were continuously used, and perchloride of mercury internally. Sulphate of copper was used as an emetic, and was of great value in the early stages of laryngeal croup, but the prolonged use of emetics was dangerous. Tracheotomy was resorted to when suffocation was imminent; the operation, in Bokai's opinion is contra-indicated in septic cases, and in those in which the symptoms point to involvement of the bronchi. In the discussion which followed the reading of Bokai's paper at the Buda-Pesth Society, Professor Gerlóczy stated that 157 cases of diphtheria had been treated in the Rochus Hospital with a death-rate of 43.9 per cent. Dr. Glass spoke favorably of treatment by Löri's method; this consists in burning about three-quarters of a pound of sulphur in a room, at the end of four hours ventilating the room four or five minutes, and then placing the patient in it; an adjoining room is then prepared for the patient in the same way.—*Brit. Med. Jour.*

INTUBATION OF THE LARYNX IN DIPHTHERIA.

Dr. J. Mount Bleyer, of New York (*Archives of Pediatrics*, March, 1891), gives the results of 512 cases of intubation of the larynx for croup and diphtheria operated on between 1886 and 1890; of these cases, 37 per cent. recovered. The 512 cases included 294 males and 228 females. The ages varied from 6 months to 21 years; 251 cases were under 3 years of age, with 73 recoveries; 260 were over 3 years of age, with 115 recoveries. Of 4 cases, 6 months of age, all died; of 7 cases, 9 months old, 4 died; of 3 cases, 10 months old, 2 died; of 14 cases, 12 months old, all died; of 48 cases, 2½ years old, all died. In cases of recovery the tube was removed on the first day in 5 cases; second day in 29 cases; third day in 37 cases; three days and a half in 14 cases, fourth day in 43 cases; fifth day in 22 cases; sixth day in 10 cases; seventh day in 13 cases; ninth day in 6 cases; tenth day in 4 cases; eleventh day in 3 cases; fifteenth day in 2 cases; twentieth day in 2 cases. Among the causes of death in the 322 fatal cases, extension of the false membranes occurred in 67 cases; bronchitis in 45 cases; pneumonia in 41 cases; broncho-pneumonia in 40 cases; sepsis in 39 cases; asphyxia, due to closure of the tube by membrane, in 2 cases. The author strongly emphasizes the necessity of making a forced or a normal laryngoscopic examination before operating, as the differentiation and diagnostication of other laryngeal diseases may be made out, and the extent of the diphtherial or croupous lesion seen. The tube is to be extracted daily for the purpose of removing any accumulation of loose membranes, tenacious mucus, pus, etc. "When the tube has been extracted, irrigate the posterior nares, pharynx, larynx, and entire surface with a mild solution of bicarbonate of sodium." Much of the success depends upon the judgment of the operator in selecting a suitable tube. When loose membranes exist in a case, a tube of thinner metal and larger calibre is recommended, and is left *in situ* for six hours or more. The tube once in place, the most vital portion of the treatment must be next carried out, namely irrigation of the affected parts. A No. 8 soft rubber catheter attached to a fountain-bag syringe, is passed into the nostrils alternately, and a solution of the peroxide of hydrogen (5 ounces of a 15 volume solution, chemically pure, in 12 ounces of water) is passed through; after this has been done, the next step is to wash out the mouth, pharynx and larynx. If necessary, a gag must be used; the patient is held well forward over a basin for the reception of the returning fluid. For purposes of comparison, the recorded results of tracheotomy operations are given as follows: German authors have obtained 31 per cent. recoveries in 5,795 cases; German hospitals record, 30 per cent. recoveries in 3,063 cases. French surgeons have tabulated 9,242 cases, with 24 per cent. cent. recoveries. In the Boston City Hospital between 1884 and 1887, 327 operations yielded 29 per cent. of recoveries. Out of 21,853 cases collected from all sources by Dr. Lovett, of Boston,

29½ per cent. of recoveries were obtained.—*Brit. Med. Jour.*

HYGIENE.

THE BACILLI OF MALARIA.

Dr. Andreas has recently published an interesting treatise on the comparative number of the bacilli of malaria in the air at different times of the day. His experiments, which were conducted in the Observatory of Moncalieri, and reported in the *Medicinische Neuigkeiten*, April 11, 1891, were carried out by means of small rubber balloons filled with hydrogen. On to these balloons he fastened a small box, holding prepared glass slides, which box he was able to open by means of a cord, after the balloon had reached the desired height. Microscopical examination of the slides showed that in the early hours of the day the swarms of bacteria were close to the ground and in large numbers; later, at about nine o'clock in the morning until about three in the afternoon, they would rise until they reached a considerable height, and from that time would again gradually sink to the ground. The number of bacilli in the air was almost exactly in proportion to the rise of temperature, while in direct opposition to the amount of humidity in the atmosphere. It is evident, therefore, that the condensation of the watery vapors in the air cause the falling of the bacilli, and for this reason the morning and evening hours are the most dangerous in malarial districts.

INFECTION THROUGH THE SOIL.

The question is often raised whether there is any direct or indirect proof of the infectivity of the bodies of those dying from specific fevers, or whether the soil of graveyards may become really dangerously contaminated thereby; but it is also one to which comparatively little attention has been given by the experimentalist. One aspect of the matter has been lately studied by Dr. Justyn Karlinski, of Konjica, Herzegovina; in a series of experiments (*Centralblatt f. Bakteriol.*, ix, 13) undertaken to determine whether the organs of the body undergo any change in temperature during the natural process of decomposition after burial in the earth, and especially whether any differences in this regard are to be met with in the case of infected subjects. His results show that invariably the putrefactive process is accompanied by a rise of temperature above that of the circumjacent soil; and also that this rise in temperature is markedly higher when the parts examined have been taken from the bodies of men or animals who have succumbed to infective diseases than it is in the case of healthy bodies. He further examined into the question of the survival of the pathogenic bacteria in the affected parts, and states that the typhoid bacilli may retain their vitality in the decomposing spleen for three months, and are only completely annihilated by rapid putrefaction and the presence of a large number of the bacteria of putrefaction. Dr. Karlinski says that he had previously shown that typhoid bacilli could retain their vitality for a period of five months in soil, but that if the earth were thoroughly saturated with rain water they were destroyed in from seven to fourteen days. The part played by the soil in the origin of epidemics should not, he thinks, be underestimated, since typhoid bacilli can only exist in water a comparatively short time.—*Lancet.*

INFECTION FROM MILK.

In the *Glasgow Medical Journal*, for October, appears an account of an epidemic of erysipelas and sore throat, occurring among families supplied with milk from a certain farm. The most striking symptom was an intense inflammation of the fauces, resembling erysipelas of the mucous membrane, with swelling of the glands of the neck, and in some cases suppuration. In some, true erysipelas of the skin developed. The temperatures ranged from 102° to 105° during the first few days of an attack. Convalescence was attended by extreme prostration. No bacterial examination was made, but a clear connection was traced between the milk and the epidemic.—(*Jour. Amr. Med. Asso.*)

THE ETIOLOGY OF TETANUS.

In the last number of the *Annales de l' Institut Pasteur*, there appears (from the Bacteriological Laboratory of Val-de-Grâce) a most interesting paper on tetanus by Drs. Vaillard and Vincent, which appears to throw very considerable light on the subject of tetanus, and to clear up a number of points and observations that have hitherto been enshrouded in obscurity. After describing the organism, and identifying it with that already made familiar through the papers of recent writers, the authors give it as their firm opinion that in cases of artificial inoculation of pure cultures it is always the poison introduced along with the bacillus, and not the organism itself, that acts upon the animal.

This indeed seems to be probable, as they are able to prove that almost inconceivably minute doses of this poison, which they compare with snake poison, are quite sufficient to produce all the symptoms of most acute tetanus; in fact, it was almost impossible, from some of the cultures that they obtained, to administer a dose that was not lethal.

An exceedingly interesting feature brought out in the course of their work is that in no case was the poison developed as soon as the organism began to grow; in fact, gelatine cultures of the tetanus bacillus were never capable of producing toxic symptoms until liquefaction of the gelatine had commenced, when spores were demonstrated to have been formed, and when the peculiarly disagreeable odor so characteristic of tetanus cultures had become perceptible. They associate both the odor and the peptonizing power with the formation of the poison in the cultures. That it was due merely to the presence of the spores that the material was poisonous they demonstrated by heating their cultures to a temperature of 62° C., for a short time (a temperature which is quite incapable of interfering with the vitality of the spores), when it was found that cultures so heated and introduced by inoculation into a rabbit or a guinea-pig failed to produce any tetanus, thus proving that although the spores are not killed the poison has been destroyed by the heat. The spores were proved to be living by making fresh cultures from them in artificial media; after a time they grew luxuriantly, and if left to grow eight or ten days produced another crop of the poison. By simply washing away the poison from the spores with distilled water they also obtained similar results, for, although the spores could still develop and form the specific poison in artificial media, they were, when inoculated, incapable of giving rise to any symptoms of tetanus. From the reaction to heat of a substance they were able to separate, and from its resemblance to the diastases in other respects, they conclude that they have obtained from tetanus cultures the true tetanus poison, a poison, however, that cannot be formed by the tetanus bacillus in healthy tissues. The microörganisms are here so rapidly attacked by the leucocytes that they are rendered *hors de combat* before they have time to form their poison.

It has long been well known that the tetanus bacillus could not develop in the tissues except, apparently, in the presence of other organisms, and the suggestion is offered that these other organisms act in one of two ways; they either paralyze the activity of the leucocytes, or they draw off, as it were, their attention and activity from the tetanus bacillus, thus allowing it sufficient time to develop its characteristic products. It is interesting to note that Drs. Vaillard and Vincent consider that in many respects the tetanus bacillus is extremely like the diphtheria bacillus, the method of action on and in the organism being essentially the same in the two cases, the above factors in all probability playing a part in diphtheria much as in the case of tetanus; and it is evident that in studying the one poison much light may be thrown on the other. Behring and Kitasato appreciated this fact, and combined their forces to work out the question of immunity in these two diseases. It is obvious, however, from a consideration of some of the points that are indicated in this paper, that there are many sources of fallacy that will have to be eliminated before the ultimate explanation of the condition of immunity in protected animals can be given. The facts that this poison is active in such extraordinary minute quantities, and that the microörganisms are able to grow with such difficulty in the human tissues, allow us to hope that extremely minute changes in the blood may be quite sufficient to secure the alteration or breaking-down of the virulent poison, even when it has become diffused throughout the system. So long as the organism is localized to the wound, there is, of course, more chance of coping successfully with the disease, although here, as in other diseases, there always appears to be a possibility of the poison exerting such a paralyzing influence on the cells that usually take up foreign substances, that secondary septic conditions may be liable to occur even when the action of the tetanic poison can be antagonized so far as its primary effects on the cells are concerned. One question appears to be set at rest, and that is, as regards tetanus and diphtheria, the ptomaines have had their day, whatever may become of the products of other organisms. It may be accepted that here, at any rate, we have some subtle poison which, although it has not yet been actually separated, has become so far isolated that it may be taken as proved that it is not an alkaloid or basic poison. A most remarkable feature is that, in peptonizing gelatine with the filtrate from a meat-broth culture of the tetanus bacillus, the poisonous properties are lost to a certain degree in direct proportion to the amount of gelatine that is peptonized; this, taken in conjunction with the fact that the properties are not developed until the gelatine begins

to liquefy, has led Drs. Vaillard and Vincent to suppose that the same agent that peptonizes the gelatine is the active agent in bringing about the development of the toxic symptoms of tetanus.—*The Lancet.*

THE REPUTED CAUSE OF INFLUENZA.

Dr. Tezzier, of Lyons, France, claims that influenza is produced by a microbe, which he styles the strepto bacillus, whose habitat is putrid mud. That Russia is its home is, in his opinion, due to the fact that bad drainage, filthy streets and neglected barnyards are the rule, a condition particularly aggravated by swollen rivers and generally wide plains.

BACILLI IN SYPHILIS.

Dr. von Marschalko, who has been working in the pathological laboratory of the Buda-Pesth University at the subject of the bacteriology of syphilis, has devised a method of staining by which bacilli may be found in syphilitic growths of various kinds, such as papules on the skin, the indurated base of a chancre, and condylomata, as well as in the secretion of primary sores, while he has not been able to find them in non-syphilitic growths or in the secretion of soft chancres. Whether they are really inseparably connected with syphilis can, of course, only be decided by a prolonged series of observations, but there would at least appear to have been a *prima-facie* case made out for further investigation. The method employed is by double staining, as follows:—The object, after having been hardened in alcohol, is immersed for thirty-six hours in an alkaline solution of methyl blue; it is then rinsed well with water, and re-stained by a concentrated solution of vesuvin in water. The bacilli are stained blue, and can be easily distinguished from the tissues, which are brown.

HINTS ON DISINFECTION.

Dr. von Esmarch has innumerated some of the points that should be specially attended to in the use of disinfecting apparatus. He agrees with most authorities that steam, either circulating or under pressure, and without the admixture of air, is by far the best means of disinfecting clothing and other articles that will withstand the action of moist heat. As to whether circulating steam or steam under pressure is best, he thinks that it is entirely a matter of convenience, but it will be readily understood that where large chambers have to be constructed it would be difficult and extremely expensive to build them of sufficient strength to withstand any great pressure from within. Even in the case of smaller sterilizing chambers, the expense of obtaining them sufficiently strong is so great that in most cases their use is precluded. The main desiderata for a perfect disinfecting apparatus are that it shall be close to the source of the steam-supply; that there shall be sufficient steam developed to fill it thoroughly, and to keep up the temperature for some length of time; that the steam shall be sent in at the top and passed out at the bottom, in order that every crevice of the apparatus may be filled; and that where it is used in large establishments, it shall be placed between two rooms, into one of which articles to be treated are to be taken, and passed in at one door of the sterilizer; while the other room should be at the other end of the sterilizer, and into it the clothes should be passed, so that they shall not again be brought into contact with unsterilized clothing, etc. Articles that are to be disinfected should not be allowed to remain too long in contact with steam, and before being steamed they should be thoroughly heated, so that there is no opportunity for the steam to condense on cold surfaces, and in the same way they should be well dried by heat after the steaming process has been concluded. Twenty minutes is quite long enough to allow most ordinary articles to remain exposed to a moist heat of 212° F., so that they should be left for this length of time after the temperature has once been raised to this point, this being determined by an electrical contact thermometer, or a thermometer placed in a tube through which the steam escapes; some simple manometer should be used to determine the pressure that has been obtained by super-heating the steam. The greatest attention should be paid to this point of time of exposure, for it is the experience of all medical officers of health that nothing deters people from sending their clothes to be sterilized so much as the fact that they are frequently ruined by too long an exposure to the action of the steam. Discrimination must also be used in determining what articles can be safely steamed, and an officer of health who ordered stamped plush, leather, skins, or waterproof material to be exposed to heat would render himself liable to be heartily laughed at by all practical men. Grease should always be removed if possible before the articles are put into the sterilizer, otherwise it becomes fluid and is liable to spread to other parts.—*Hygienische Rundschau.*

MEDICAL CHEMISTRY.

THE PHENYL-HYDRAZIN TEST FOR SUGAR.

Havilburg (*Centralbl. für klin. Medicin*, January 31, 1891), of Rio de Janeiro, proposes a modification of the Fischer-Jaksch test for the presence of sugar in the urine, which he considers more reliable. Two parts of phenyl-hydrazin hydrochlorate and three of sodium acetate are added to half a test-tube ful of water, to which a like quantity of urine to be tested is added. Instead of boiling over a water-bath the mixture is shaken with chloroform. In a little time the fluids separate. If sugar be present canary-yellow crystals appear in the upper layer. The reaction is more striking if the fluid is boiled a permitted to cool before the addition of chloroform. Havilburg suggests that the procedure might be adapted for use as a ready means of quantitative determination of the amount of sugar present.—*Amer. Jour. Med. Sci.*

THE PRACTICAL VALUE OF THE ALPHA-NAPHTHOL TEST FOR SUGAR.

Posner and Epenstein (*Berlin. klin. Wochenschrift*, Feb. 23, 1891), reviewing the details of this test, consider it to be free from many of the objections raised against other tests for sugar. It depends upon the fact that a solution of sugar, in the presence of pure concentrated sulphuric acid and a solution of alpha-naphthol, gives a violet-colored reaction, due, according to Udransky, to the separation of furfurol. This reaction occurs not only with sugars but with all carbohydrates and certain albuminoids; hence, the urine must be free from albumen. The test is extremely sensitive, showing one-hundredth of one per cent. of sugar. The reagents and glasses must be chemically clean. It was noted that normal urine, *i. e.*, urine which showed no presence of sugar by any of the accepted tests, gave with this test the reaction of such intensity as to indicate the presence of two-hundredth of one per cent. of sugar. The authors do not discuss the cause of this occurrence, deeming it sufficient to state that if the urine is diluted at least twenty times, this reaction is not obtained in normal urine. Hence, in practice the urine must always be previously diluted. The quantitive analysis for sugar by this method does not give perfectly accurate results in the decimal figures of the percentage. The authors conclude that the test is a valuable addition to practical medicine.—*Univ. Med. Mag.*

TEST FOR PURE ANTIPYRINE.

According to Dr. Gille, in the *Deutsche Medizinal Zeitung*, April 13, 1891, pure antipyrine may be tested by the following methods: (1.) The concentrated watery solution of antipyrine should have no effect either upon red or blue litmus paper. (2.) Pure antipyrine melts rapidly when exposed to heat, and gives off inflammable gasses, without leaving any unmeltable deposit or carbonated residue. (3.) One gramme of pure antipyrine should be entirely taken up by one gramme of water or alcohol. (4.) Sulphurretted hydrogen throws off no deposit in a watery solution of antipyrine.

A NEW POISON IN CHEESE.

Dr. V. C. Vaughn announces a new poison found in cheese. A number of samples of the suspected cheese, which, it was alleged, had caused nausea and vomiting, were examined at the hygienic laboratory, of Michigan University. Its poisonous character was proved in experiments on animals by its causing death in a few hours, but the nature of the poison could not be determined further than that it was not tyrotoxicon and that it belonged in the list of so-called poisonous albumens.

A NEW TEST FOR ALBUMEN AND OTHER PROTEIDS.

Dr. John A. MacWilliam gives in *The British Medical Journal* a method of testing for proteids by salicyl-sulphonic acid. Take a small amount of urine (for example, 20 minims), preferably in a very small test-tube, and add a drop or two of a *saturated* watery solution[1] of the reagent. If the urine is strongly alkaline, an extra drop or two of the acid should be added, and if no opalescence or precipitate occurs it is well to test the reaction with litmus paper, and make sure that the urine has been rendered strongly acid. On adding the reagent, shake the tube quickly so as to mix its contents. Then examine at once. The occurrence of an opalescence or cloudiness *immediately or within a very few seconds* (for example, 2 to 3 seconds), is a test for proteids intermediate in delicacy between the cold nitric acid test on the one hand, and the acetic acid and heat test (in favorable circumstances) on the other. The development of an opalescence some time after (for example, ½ to 2 minutes), is a more delicate test than even acetic acid and heat, and shows the presence of

[1] It is important to notice that the solution must be a saturated one in order to obtain the best results.

minute traces of proteid, which are probably insignificant from a clinical point of view as a rule.

Next heat the tube to the boiling point. If the precipitate or opalescence is caused by the ordinary "albumen" (albumen and globulin) commonly present in albuminous urine, it does not disappear on heating, but, on the other hand, becomes markedly flocculent. But if the precipitate or opalescence is due to the presence of albumoses or peptones, it clears up on heating (before the boiling point is reached) and reappears when the tube cools.

NEWS AND MISCELLANY.

OUTSIDE PHYSICIANS CAN ADMIT PATIENTS TO THE PHILA. POLYCLINIC HOSPITAL.

As evidence of the liberal spirit with which the Philadelphia Polyclinic Hospital is managed, it has been decided that the full privileges of the wards, private rooms and suite of operating-rooms may be extended by any member of the staff to physicians not connected with the institution.

Many physicians who are not attached to Hospitals have frequently cases that they would like to have under the auspices of a Hospital with its resident physicians, trained nurses and sanitary regime, and yet wish them under their own observation.

Patients thus admitted to this Hospital are attended by the physician for whom the case is admitted as fully as though he were a member of the staff. The admission blanks must invariably be signed by a member of the staff, who thereby assumes the responsibility for the acts of the physician, after which arrangements and terms may be made with the matron.

Visitors are cordially invited to visit and inspect the Hospital, on Lombard street, west of 18th, on Mondays from 3 to 4 P. M.

MUTTER COURSE OF LECTURES ON SURGICAL PATHOLOGY.

Prof. Roswell Park, of Buffalo will deliver the remaining four lectures of the Mütter Course, in the Hall of the College of Physicians, of Philadelphia, N. E. Cor. 13th and Locust Sts., on May 12, 13, 14, and 15, at 8.15 P.M.

Subject: Surgical Bacteriology. The medical profession are cordially invited to attend.

A SIMPLE METHOD OF REMOVING A NEEDLE.

I think it may be of service to record a simple means by which I obtained the removal of a broken needle from the heel of a young girl, aged 12, whom I saw lately walking about on her toes to avoid her right heel, into which a needle had been broken, touching the ground. The buried end could be felt, but any pressure led to its further entry. I directed her to wear a large thick corn-plaster around the spot, with a little wet cotton-wool in the center, and to tread freely on the heel. Within a week afterwards she showed me the needle, which had protruded, and she had easily withdrawn it. Thus no wound was made, and no scar left to be a tender spot on the plantar surface.—*Chas. Steele, M. D., F. R. C. S., in Brit. Med. Jour.*

ALCOHOL AND DIGESTION.

From experiments made on himself by Dr. Eichenberg some further knowledge of the effect of alcohol on digestion is obtained, which contrasts strongly with the teetotal lecturer's experiment showing how digestion in a glass vessel is retarded by alcohol. Dr. Eichenberg found that a small dose of strong alcohol—*e. g.*, brandy—shortens the time that food in general, whether animal or vegetable, or a mixture, remains in the stomach by more than half an hour. A similar but not quite so marked an effect is produced by a dose of diluted hydrochloric acid or mustard. Pepper and condurango diminish the time the food remains in the stomach by about a quarter of an hour. Beer and an infusion of rhubarb had no effect.

An enterprising lady has been making investigations upon the question of matrimony in regard to her sex. She finds that the highest marriage rate is among trained nurses, and impartial observation would rather tend to support the statement that this is the best field for matrimony which the fair sex enjoys.

A French dispensing chemist points out that a mixture of bromide of sodium and hydrochlorate of cocaine results in the alkaloid being precipitated. It will be well to bear this in mind, for, with the cocaine merely suspended, a serious and, in an infant, even a fatal accident might easily result.

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CLINICAL LECTURE.

ONE OF THE SEQUENCES OF LAPAROTOMY —RETROVERSION OF THE UTERUS— THE USE OF PESSARIES.

BY H. MARION SIMS, M. D.,

PROFESSOR OF GYNÆCOLOGY AT THE N. Y. POLYCLINIC, VISITING SURGEON TO SAINT ELIZABETH HOSPITAL, &C., &C.

Gentlemen:—The patient I present to you now, illustrates a condition following laparotomy, which is of a peculiarly trying nature to both the physician and the patient. This woman has a very interesting clinical feature in her history, and as she presents a condition you may be often called upon to treat in gynæcological practice, I shall give it to you in detail.

To begin with, this patient's original trouble commenced with a constant and persistent pain throughout the pelvic organs, of a most exaggerated character, which was accompanied by a very severe dysmenorrhœa. She had, in addition to this, pains in the back, headache, and all the symptoms such patients usually have, but in a most aggravated form. When she first came to this clinic for treatment, I found that on digital examination the dysmenorrhœa in her case was due to a diseased condition of the tubes and ovaries. There existed what is known as an apoplectic condition of the ovaries, with total occlusion of both tubes. I sent her to the Hospital and there performed abdominal section, under the strictest antiseptic precautions, removing both tubes and ovaries, with the result of a marked and decided improvement in every respect in her general condition. She was on the eve of being discharged from the Hospital, perfectly cured, when I accidentally discovered a small fistulous opening in the line of the abdominal incision. On passing down a probe carefully through this opening, I found that the instrument was deflected to the left in the direction of the former seat of the left ovary, and extending to a depth of six or seven inches in all. I immediately suspected the cause of the trouble to be an attempt on the part of nature to throw off the ligature that had been placed around the pedicle of the ovary that had been removed from that side, and, on passing a long forceps through this fistulous opening I very readily grasped something with its blade which I knew by the sense of touch to be the suspected ligature. This I then brought away with the forceps. It was exactly in the same condition as it was when first introduced. The fistulous opening on that side healed up immediately.

The fistulous opening on this side of the abdomen had no sooner healed up than another one developed on the right side, due to the same cause, but which was not so easily removed as in the former instance. Through this opening I passed a small-sized curette down to the bottom of the sac to the depth of about eight inches. I could readily make out by touch the existence of a foreign body, occupying the same relationship to the stump of the right ovary as was the case with the left one. Withdrawing the curette, I then thrust the forceps down the fistulous tract and I could readily grasp the ligature with it. I made traction on the ligature with the forceps, but this threw the patient into a paroxysm of such acute suffering that I was compelled to desist from any further attempt in that direction, and postpone the operation for another day. Finally, after three weeks of futile attempts at this kind of work, with the patient tired and myself discouraged, I thought I would make another attempt, in a somewhat different manner, to remove the offending ligature. I accordingly put the ligature on the stretch, and with a small probe for a guide, locating the end of the ligature, I cut the ligature completely away with a blunt-pointed bistoury. The fistulous opening soon afterwards healed promptly and the patient experienced no further trouble in that direction.

I mention this incident to you to-day in connection with the case of this woman be-

cause it is not an uncommon occurrence following a laparotomy, and is one with which you should become familiar. The ligature would never have spontaneously come away in this case, and there would be as a result a very disagreeable, running fistula.

Now, the next question that naturally suggests itself to our minds in this case is, how are we to get this fistulous opening healed up as rapidly as possible? The opening in the case of this woman was originally eight inches in depth, but it is now only three and a-half, and is gradually filling up with healthy granulation tissue. She complains of considerable weakness, slight flushing of the face, a tired feeling, and other symptoms of a like nature. I have told her that all these symptoms were due to the fact of the removal of both ovaries and tubes, and the same condition is brought about by their removal as if she had undergone a practical change of life. The proud flesh you see collected about the margin of this fistulous tract will have to be removed, and the simplest and readiest way to accomplish that is by means of the curette under cocaine. And when the normal tissue is reached, the tract will then heal up quite readily. It may also be packed with iodoform or bichloride gauze, or what is better still, applications of pure carbolic acid may be made to the entire fistulous tract, and the parts then dressed with bichloride gauze, as I have done in this case.

I wish to say a word, in this connection, about the form of ligature that should be used in these cases. The ligature I generally employ, is silk, as I consider it the strongest possible form of ligature that can be used for this purpose, and is, at the same time, the most reliable. You can be certain it will not give away, or be absorbed like catgut. The only trouble I ever experienced in my life, was in the use of catgut in a patient with a lacerated cervix and perineum. I employed catgut for suturing the cervix, putting in four stitches, and to my great surprise, on the third day after operation, I was called to the patient's bedside and found her with a profuse and exhaustive hæmorrhage from the circular artery; the four catgut sutures having come away, leaving the wound in the cervix gaping widely. Since that time I have never employed catgut in these operations, as catgut is always apt to come away, but silk never.

RETROVERSION OF THE UTERUS.

The next patient comes to us complaining of a train of pathological symptoms that one very frequently hears at clinics of this kind. She has a constant and distressing backache, persistent headache, and dragging down pains across the small of the back, which have existed for a considerable length of time. She also complains of a very obstinate form of constipation.

As I examine this woman's uterus, I can readily understand the reason for the continuance of these disagreeable symptoms. She has a uterus that is somewhat retroverted, and in making an examination for this condition, I always first ascertain the degree of mobility of that organ, whether it be freely movable, laterally as well as antero-posteriorly, and whether it can be lifted out of its position and restored to its normal relationship in the pelvic cavity. When we have found out these different conditions, we will then be able to determine what we can do for the patient.

To ascertain whether a uterus can be elevated, it is not always necessary to employ a uterine elevator for that purpose, but with a cervix so short as this is, I do not think we can get sufficient leverage manually on the anterior lip, without the use of an elevator. A good many gynæcologists do not believe in the use of an elevator for this purpose, and there are also some who argue that retroversion is not a disease *per se*, but a symptom. I do not, myself, consider displacement of the uterus a disease, but it gives rise to certain reflex symptoms, which can be removed by restoration of the uterine organ to its normal position in the pelvic cavity. I have seen so many of these patients benefited by this simple manœuvre, that I always have recourse to it when such a condition is possible. If there be adhesions formed around the uterus, you can very readily determine to what extent they are present when you pass your finger into the rectum of the patient. Under such circumstances, it may be necessary to break up these adhesions under ether, and without subjecting the patient to the risk of a laparotomy. This can be readily and easily done by means of the uterine elevator, with the patient at home in bed. After the operation is completed, she should be kept in bed for from three to six days afterwards. During that time I always make it a practice to watch her carefully, and if she complains of any pain or tenderness about the pelvic region, I treat her for these symptoms by hot douches, warm anodyne applications, and other measures appropriated for such cases. If you are careful in your operations about the uterus, you will never experience

any trouble as a result thereof.

After breaking up the adhesions in this way, I elevate the uterus a few times, to educate it, so to speak, towards assuming its normal position in the pelvic cavity. Finally, after repeated efforts in this direction, when the uterus can be readily raised without giving the slightest pain or discomfort to the patient, I then proceed to use cotton tampons or a pessary, or whatever I may deem best adapted to the case in hand.

Speaking of pessaries in this connection reminds me of the fact that twenty years ago, when I began to first practice the art of gynæcology, every one was speaking of pessaries, while to-day, among gynæcologists, we very seldom hear a pessary referred to. I do not think the time will ever come when this instrument can be safely relegated to the back shelf in gynæcological practice. If there is one subject, more than any other, that has been abused, that subject certainly is the use of the pessary. The pessary has undoubtedly, caused a good deal of harm in many instances, but I contend that this harm has been due to the flagrant abuse of this instrument, and not its use. We have many patients who come to us like this patient before us, suffering from a chronic condition of retroversion, who have been very materially benefited by the reposition of the uterus and its maintenance in its normal anatomical position in the pelvis by means of a well-fitting pessary. A pessary, no matter of what kind it be, whether it be a tampon of cotton, or one of tin or rubber, certainly does give great relief to the patient in a large majority of cases. In the fitting of a pessary there is at times as much mechanical ingenuity required of the physician as in the making of any mechanical appliance. The instrument must fit "just so," to be worn with any degree of comfort. It must neither press back in front nor at the sides. In fact as much care should be taken in the fitting of the instrument as a dentist would take in the fitting of a plate in the mouth. If the patient complains of undue pressure or pain caused by the instrument at any point, it should be removed at once, and the patient herself should be instructed how to remove it in case it gives her the least discomfort

In fitting a pessary for displacement the method I always employ is to first map out in my mind the exact shape of the vagina, its length, its breadth and its general outline. I then take one of these Sims' block tin rings, which, as you see, is perfectly malleable and can be bent into any desired shape. I recommend these rings to you because of their ready adaptability to any case and because you can make almost any one's pessary out of them; they are to be furthermore recommended, because if the pessary is an instrument you need only occasionally, you will find these rings very much cheaper than a rubber pessary, and a dozen of them will answer the purpose of five or six dozen of the others. They are, therefore, very much more economical for an ordinary practitioner or a country doctor to carry for gynæcological practice. I take this medium sized block tin pessary and mould it in my hand until I think that this curve I have given it posteriorly will suit the required purpose. The width I give it by gently pressing in the hand and the slight curve downward which I give it anteriorly, is done for the purpose of preventing a too firm pressure against the pessary.

I will now proceed to place this pessary in position, and this is best done with the patient lying on her back. By making firm pressure downwards with one index finger on the perineum, you see that the instrument is readily slipped into position by the uterine elevator. The next step is to let your patient get up and walk around the room, in other words, to test the instrument fully before allowing her to leave your office. If she complains of pain at any point, remove the instrument at once and find out the exact point of pressure and where the fault lies with the instrument. Having made the necessary alterations in the instrument, replace it then and you will find it will be perfectly comfortable. Never permit a patient with a newly adjusted instrument to go away and remain for several days from under your observation. Always instruct her to return the very next day so that you can be sure the instrument is doing no harm, or else, if she lives at too great a distance to return the following day, then instruct her how she is to remove it herself in case it causes her the slightest inconvenience or the least pain.

Now, this block tin pessary is not to be applied in this case as a permanent instrument by any means. Being made of block tin, it is apt to corrode and to cause at the end of a few weeks sore spots on the mucous membrane of the vagina. Consequently, I only use it as a temporary instrument to get the proper shape of what will subsequently be a permanent one. When the block tin instrument fits satisfactorily, as you think it ought to do, you can then remove it, send it by mail to the nearest instrument maker and

have him make you a hard rubber one, of exactly similar kind, or, if you have any mechanical ingenuity about you, you can take the hard rubber one and with the aid of a spirit lamp and a little vaseline or sweet oil, mold one into the required shape.

Having now adjusted this pessary in the patient before us, you see that it holds the uterus up perfectly, the patient complains of no pain whatever, her backache has gone, and I have no doubt but that after wearing the instrument a few weeks, her general health will be in every way very much improved. She will be able to go about her work and attend to her duties as she has not been able to do for some years past.

The next patient I present to you illustrates, very strikingly, the points I have just given you in regard to the management of adhesions around the uterus. This patient came here some months ago with the uterus bound down on all sides by firm bands of adhesions, which I have broken up under ether, in the way I have just pointed out to you, until the uterus was rendered freely movable, and after two or three weeks of local treatment it has been kept in its normal position in the pelvic cavity by means of a Thomas Smith pessary. She came here with exactly the same symptoms and condition as the patient I have just spoken to you about, and she is now entirely free from all the symptoms that accompany retroversions. She wears the pessary without the slightest inconvenience, and is hardly aware of the fact that she is wearing one at all. A pessary is worn with advantage only in one way, and that is when it gives rise to no pain whatever from its use.

Bear in mind the fact that there is no one pessary that will fit any two patients, and each instrument must be molded to suit each individual case. Mold your instrument to fit your patient and do not try to mold your patient to fit the instrument. When you have fulfilled these anatomical indications you will then know how to fit an instrument correctly so that your patient will be able to wear it with a great deal of practical comfort and satisfaction.

Synthetical Quinine.—MM. Grimaux and Armaud have succeeded in producing a quinine by synthesis which is said to be in every respect identical with the quinine of vegetable origin. They arrived at this result by treating a base obtained from the *Remijia Pedunculata* (cuprein) with sodium, and heating the compound thus obtained with chloride of methyl.

CHRONIC GASTRITIS—GASTRIC ULCER—ATROPHY OF THE GASTRIC MUCOUS MEMBRANE.[1]

BY J. P. CROZER GRIFFITH, M.D.,

PROFESSOR OF CLINICAL MEDICINE IN THE PHILADELPHIA POLYCLINIC; ASSISTANT PHYSICIAN TO THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

Gentlemen.—The first case that I shall show you is interesting and practically very useful to study. The man is one of those individuals from whom it is difficult to obtain an entirely satisfactory account of himself. He came here a week ago, with a history somewhat as follows: He is 39 years of age, married, and an iron-worker by occupation. He has had the ordinary diseases of childhood, except whooping cough, and suffered from measles only a few years ago. With these exceptions he has been practically well until within a year and a half. Then, for causes unknown to himself, he began to feel weak and out of health, and afterwards to lose flesh. He also began to experience pain in the epigastrium and a sensation of distress on eating, but he did not have much vomiting until last Autumn. During the summer he imbibed stimulants in rather large quantities, but it does not appear clear whether this habit was the result of fondness for drink or of an effort to overcome the weakness. In November he commenced to vomit nearly every day, and often several times a day. For the past three weeks he has not been troubled so much in this way, although he still vomits frequently. The pain which he suffers comes on at no regular period as related to the time of the ingestion of food, although it appears to be food which produces pain. Neither does the vomiting occur at any difinite time. There has been no history of ejection of large quantities of food, or of blood; nor has there been in the vomited material any particularly dark substance, further than could be explained by the character of the food taken. The bowels have recently been constipated, though formerly they were regular. He does not know what articles of diet disagree with him most. After a general mixed meal he is apt to suffer pain and distress. At times he can restrain the vomiting for hours, but eventually he is forced to yield to the inclination.

This, gentlemen, is the history in brief.

[1] A Clinical lecture delivered at the Hospital of the University of Pennsylvania.

It is not very perfect, but it is the best we can get out of him. It is not typical of anything, but it is interesting in connection with the case which was before you last week.

You probably remember that anæmic girl who suffered intense epigastric pain, coming on soon after eating, and shooting through to the back; while vomiting occurred very soon after the ingestion of food. Ulcer of the stomach was naturally suspected, for this is apt to occur in females of about her age.

It is quite certain that patients often have no marked gastric symptoms and yet may have an open ulcer in the stomach. Again, it has been found that certain patients, after suffering from the symptoms of ulcer, appear to recover entirely, and go on for an indefinite number of years without further gastric symptoms, and then relapse. Or they may evidently die of some other disease, and at the autopsy an ulcer may be found in the stomach entirely unhealed. It has probably been open, but inactive all these years.

We therefore may have an ulcer without any characteristic symptoms, and again an ulcer present with severe symptoms; the symptoms later disappearing, although the ulcer has not healed.

The girl of whom I have been speaking says that for a long time she has not passed more than two or three days without vomiting. For the past week she has been at absolute rest in bed, and has been on an exclusive diet of peptonized milk in small quantities. She has not vomited since she entered the hospital. She feels better and her health is improving. This shows what rest and proper food, in proper quantity will sometimes accomplish.

A very important matter to be borne in mind in her case, was the condition of her blood. We found on examination that there were 2,900,000 red blood cells to the cubic millimetre. That is, taking 4,500,000 as the normal number for females, she had 64 per cent. of erythrocytes. The amount of hæmoglobin, however, only equalled 20 per cent. There is therefore a marked contrast between the percentages of hæmoglobin and of red blood cells. The girl really has chlorosis or chloro-anæmia, and it is conceivable that the pain in her case is simply of the nature of a cardialgia, a common symptom in chlorosis, and that there is no ulcer. It is equally possible however, and much more probable in the light of the very marked gastric symptoms, that an ulcer does exist which is the indirect result of chlorosis; since it is a very well-known fact that this disease acts as a powerfully predisposing cause of ulcer of the stomach. The presence of chlorosis modifies the treatment to some extent. It has been found that in order to effect the healing of a gastric ulcer, it is often first necessary to remove the chlorosis or anæmia. Consequently in addition to the rest and careful diet of which I spoke, the girl has been taking iron. Now nearly all of the preparations of iron are irritating to a stomach in this condition, and it is most important to choose one which is entirely free from this disadvantage. Within a few years a number of preparations of iron have been devised for which this property is claimed. The one which I have employed in this case is the Liquor Ferri Albuminati, the solution of the albuminate of iron, made by Drees, of Bentheim, Germany. It is of neutral reaction, entirely free from metallic taste, does not coagulate albumen, and is usually perfectly well borne by the stomach. Even in cases in which hæmatemesis has recently occurred, the use of this preparation is not contra-indicated. The girl of whom I have been speaking, takes it readily. It may be given in doses of 10 drops, three times a day at first, but a much larger amount can later be administered.

To return to the case of the man still before us. You observe that he is considerably emaciated, rather pale, yet with no decided cachexia. He is quite weak and is able to walk but a short distance. His other symptoms I have already reviewed.

There are several diseases to be taken into consideration in the diagnosis of his case. One is gastric ulcer; a second is chronic gastric catarrh, or chronic gastritis which is practically synonymous; a third is carcinoma ventriculi, and a fourth is simple dilatation of the stomach. Gastric ulcer can be readily excluded by comparing this man's symptoms with those of the girl. The pain does not come on so soon after eating, it is not as intense and is not as localized as in ulcer. The vomiting, too, is not so prompt, and there is, indeed, very little connection in this case between the time of eating and that of vomiting. There is another very important matter,—the chemical characteristics of the gastric contents—to which I shall allude in a few moments.

Simple dilatation of the stomach, *i. e.*, a dilatation not due to carcinomatous constriction of the pylorus, may produce a degree of anæmia and emaciation which is surprising.

I do not know that I have often seen cases more emaciated than sometimes after simple gastrectasia, where the stomach seems for various reasons to have lost the power of emptying itself of food and has dilated to a remarkable degree. This condition can be recognized in various ways. One plan, proposed by Ewald, rests on the use of salol, of which 5 or 10 grains may be given at one time. Salol is supposed not to undergo decomposition into salicylic acid and carbolic acid until it reaches the intestinal juices. By having your patient pass his urine every fifteen minutes and testing this with chloride of iron, you may, by observing the brown coloration, determine how soon salicylic acid appears in it. Where the stomach is inactive the salol may remain in it for hours or days. If, after the administration of salol, you can in the course of half an hour detect salicylic acid in the urine, you feel assured that there is no motor insufficiency. It is however necessary to say that the value of the salol reaction is much disputed by various observers, and is still problematical. The test may be a help in forming a diagnosis, but cannot be relied on as conclusive. We have not yet had an opportunity of trying it in this patient.

Another method of determining the presence of dilatation is by percussion. It is, however, often very hard to be positive as to the different percussion boundaries of gastric resonance. The liver covers the lower portion of the right boundary, and the left border, also, cannot be located with certainty. The upper border is partially covered by lung. After all, these boundaries usually vary but little in any case. It is the determination of the lower boundary which is the important matter. It is this which you wish to find in gastrectasia, and having found it, the others can be disregarded. You will find in practice that it is frequently, perhaps usually, not easy to distinguish the tympany of the stomach from that of the colon and small intestines. The ability to do this in any case depends a great deal upon the respective amount of gaseous dilatation of the various viscera. By simple percussion it is often impossible to fix the lower limit of the stomach. Where there is great dilatation you may find a loud, deep-toned tympany in the gastric region, and you may get the succussion splash on tapping with the tips of your fingers. Some writers, indeed, claim that the production of the succussion splash, and the noticing the regions in which this ceases, is the best method of outlining the stomach under all conditions. I think, however, that you will find it much more difficult than the description would indicate. The lower boundary of the stomach could of course, be located by passing a sound and feeling for it through the abdominal walls, in the way proposed by Leube; but this method is by no means without danger, and is unpleasant to the patient. Another plan is that of Penzoldt, namely, the passage of a tube, the pouring in of water through this, and the determination by percussion of the position of the dullness produced. This method is reliable, but unpleasant, and not free from danger, should an ulcer exist. A third method is that of Frerichs. This consists in allowing the patient to drink, say, 20 grains of bicarbonate of soda, dissolved in a glass of water, and to follow this by another glassful, containing about three quarters as much tartaric acid in solution, with a little sugar to take away some of the sour taste. Chemical decomposition at once begins, carbonic di-oxide is set free, the stomach dilated by it, and the limits of the viscus often very distinctly defined both to inspection and to percussion. The method is, nevertheless, not entirely accurate and sometimes disappoints utterly; since for its success, is required a decided ability on the part of the pylorus to restrain the gas from passing rapidly into the intestine. One must also be prepared to withdraw the gas promptly with the stomach-tube, in case unpleasant symptoms arise. Perhaps the simplest plan, and the one to be first employed, is that of Piorry, of which Penzoldt's method is a modification. This consists in causing the patient to drink several glasses of water and then in determining the lower border of the percussion dullness while he is in the erect position. This, of course, indicates the lower boundary of the stomach. On again reclining, this line of dullness shifts.

The lower border of the stomach varies considerably in its position, since, as we know, the stomach itself is a movable organ. It is however, the very generally accepted opinion that the lower boundary of the healthy stomach rarely reaches to the transverse umbilical line, and that, when it extends much below this line, the viscus is certainly dilated. In the present case, however, it is easy to determine that the stomach is not dilated, and I will not take the time to go through the examination with you.

The two diseases remaining for us to consider, are chronic gastric catarrh and cancer.

I have said nothing about dilatation from cancerous constriction of the pylorus, for there

is no dilatation in this patient. We have still to entertain the possibility of the presence of a carcinoma of some other portion of the stomach, interfering with health by disturbing the digestion, causing pain and giving rise to cachexia. It is very difficult in this case to determine whether the patient is suffering from gastrititis or from cancer. There is one sign whose presence would put the diagnosis beyond doubt. If we were certain that we could find some increased resistance, some nodular growth in the epigastrium, we should be justified in concluding that we had to do with carcinoma. If we found it in the region of the pylorus we could not certainly tell that it was located in the stomach, for it might be in the left border of the liver. Growths in the liver are, however, almost invariably of secondary nature, so that if you find severe gastric symptoms accompanying a growth which appears to be in the liver it is probable that you also have to do with a primary tumor in the stomach, whether you can detect it or not. In a case in which you were in doubt whether the tumor felt was in the liver or the pylorus your diagnosis would be aided by observing the effect of respiration. The liver moves a great deal with respiration. Hence, if such a patient breathe deeply and the tumor simultaneously move downward some distance you would be inclined to believe that it was in the liver. If, however, you can move it about pretty freely in the abdominal cavity, and it move but little with respiration, you would conclude that it was not in the liver.

To illustrate the difficulties often attending the recognition of a gastric cancer by palpation, I may tell you of a case in this hospital some years ago. The man was examined by several expert observers. All agreed that in the epigastrium, and extending into the left hypochondrium, there was a distinct mass, undoubtedly a carcinoma ventriculi. I examined him also and had no doubt of the correctness of this diagnosis. The patient suffered from progressive emaciation and cachexia and from marked gastric symptoms. After some months of repeated observation he died. At the autopsy a small growth was found in the *colon*, and the rest of the tumor was composed of fecal accumulation merely. I well recall the first—I fear not the last—time I failed to recognize such a mass. It was the case of a man admitted to the hospital in which I was then an interne. On examining him I found what I supposed to be a large growth extending over the left side of the abdomen. On the suggestion of a fellow-interne I administered a large dose of salts and the growth promptly disappeared. Since then I have always hesitated to diagnosticate any growth in the abdomen unless I was sure that the bowels had been opened regularly, and even unless I felt pretty confident that no hardened fecal accumulation existed around which softened feces could pass.

In the case before us there is no evidence of a tumor at the pylorus. I am not quite sure that there is not a sensation of increased resistance elsewhere in the gastric region, but I think it very probable that this sensation is purely subjective. It is so easy to feel something when you are looking for it.

You will find the greatest difficulty in your practice in palpating the abdomen. It takes, I think, much more experience than does the physical examination of the chest. One of the chief difficulties consists in overcoming the resistance of the abdominal muscles. Sometimes you find the abdominal walls lax, and then palpation becomes an easy matter, when, however, the patient is very fat, or the muscles very resisting you are often practically at sea and can determine nothing. If the case be one in which a decision is absolutely necessary you might give ether. This would help greatly, but it is, of course, not feasible in every case. In ordinary practice you direct the patient to draw up his legs in bed, and you may even prop him up slightly in order to still more relax the abdominal parieties. Then have him breathe deeply—sigh—through his mouth. In this way, and by gentle and skillful palpation—and only long practice after all can teach you this—you will usually succeed in determining the conditions present. Sometimes, however, it will be only after several examinations that you finally satisfy yourself.

This man has no positive evidence of cancer. There is no increased resistance determinable with any certainty, he has no marked cachexia, and he has been working very hard though sick, which accounts for much of his weakness. He could scarcely have had a cancer for the past year and a half and be in as good condition as he exhibits at present. Since he has been in the Hospital he has had no vomiting. He has been in bed and has been fed on peptonized milk. We have also given him pepsin with hydrochloric acid and wine of condurango. The latter was proposed some years ago as a

specific in cancer. It is, of course, not such, but it is an excellent stomachic, similar to tincture of cardamom.

I think, therefore, that in this patient we must make the diagnosis of chronic gastritis, in the production of which, at any rate in the increasing of which, the excessive use of alcohol has had some influence.

I have as yet merely referred to the chemical examination of the contents of the stomach in gastric diseases. This is now-a-days a most important matter. Many investigators have maintained—and perhaps most prominent among these is Riegel—that in cases of cancer of the stomach free hydrochloric acid cannot be found by certain color tests, some of which I shall presently mention; whereas in gastric ulcer the secretion of hydrochloric acid is always in excess. Further, that most cases of dyspepsia, including many cases of chronic gastritis, do not suffer from a diminution in the amount of acid secreted, but rather from an excess of it. The whole subject is still in what might be called a formative stage. What is stated positively and apparently proved by one investigator, is as positively contradicted or disproved by another. A few points, however, I think, we may depend upon. First, that in gastric ulcer the amount of free acid found is almost always in excess, or at any rate not diminished. Second, that in cases of gastric cancer free hydrochloric acid is always absent, or at any rate present in very small quantities. I do not think, however, that we are at all justified in concluding that the absence of free acid is met with only in cancer. Although many cases of chronic gastritis are characterized by an increase in the amount of acid secreted, in other cases of the same disease, and in some other gastric affections as well, the secretion is certainly diminished or absent.

The absence of acid, then, only increases the probability of the existence of cancer in cases in which the other symptoms point strongly in that direction. I should, however, hesitate to make the diagnosis of cancer if hydrochloric acid were present in normal amount, or of ulcer if the acid were absent.

Most of you are familiar with the way in which we procure the contents of the stomach. The patient is given a mixed meal in the morning, and, if you wish to be very accurate, the stomach should be first washed out. Five to seven hours afterwards syphon out the contents of the stomach with a tube, using as little water as possible. Some clinicians use no water, but simply introduce the tube and, having the patient lean forward, press firmly over the epigastrium, and thus force the contents out. I have never been able to do this with much satisfaction, but have always needed a little water. The contents of the stomach, having been secured, are filtered and examined by various chemical tests. We wish to ascertain several things. Among these are the presence and amount of lactic and butyric acids which indicate the degree of fermentation. Further, the presence of free hydrochloric acid, as this is to some degree an index of the digestive power of the stomach. You need not look for pepsin, as it has been found that where hydrochloric acid is secreted, pepsin is secreted also. You may, however, readily test the peptic strength by placing a small cube of hard-boiled white of egg in a test tube with some of the filtered fluid, and setting this in a warm place for six or eight hours. If the fluid has no peptic strength the egg does not change; otherwise it is, of course, more or less dissolved.

A very important matter which is, I think, unduly overlooked by many writers, is the presence of peptones. It is easily conceivable that a man may have no excess of pepsin and hydrochloric acid but quite sufficient to make abundant peptones of the food taken. You may find in such a case no hydrochloric acid and no peptic strength, but testing with sulphate of copper—the biurette test—may show an abundance of peptones, indicating that acid and pepsin must have been present at some time during digestion. A case of this nature was in this Hospital only a few weeks ago. I examined the contents of his stomach and found no hydrochloric acid or peptic strength, but a decided re-action for peptones. At the same time there was no reason to suppose that the patient had a cancer of the stomach. An interesting case showing the value which sometimes attaches to these newer methods of clinical study was that of a man who was for a time in the Hospital some years ago. He suffered from marked and increasing anæmia, emaciation and gastic symptoms. He was given a very carefully regulated diet, and his vomiting and distress ceased, but he continued to fail in health. The question arose whether or not a carcinoma ventricoli was at the bottom of all his trouble. To some who examined him it seemed that there was increased resistance on palpation of the epigastrium. However, chemical examination of the gastric secretions showed abundant hydrochloric acid and powerful peptic strength. On this ground the idea of carcinoma was abandoned. The case finally developed into one of pul-

monary tuberculosis, and after death there was found a duodenal ulcer, but no cancer.

Now, in the patient before us to-day examination has shown that the free acid is entirely absent, and that the secretion has no peptic strength. Are we then compelled to altar our diagnosis? I think not. As I have already told you chronic gastritis is sometimes without free hydrochloric acid in the gastric contents. We shall then remain by our previous diagnosis. We will continue his treatment and report his progress on another occasion.

I wish to say a word here in reference to the tests employed for hydrochloric acid. There are a number recommended and the battle over their respective reliability wages as fiercely as that over the indication of free acid when found. The tests perhaps oftenest employed are the methyl-violet, the Congo red, and the Phloroglucin-vanillin or Günzburg reaction. The latter is rather more difficult to apply, and I do not know that it is any more accurate or reliable. The tests generally used in this Hospital are Congo red and methyl-violet. If a solution containing free hydrochloric acid, even if very dilute, be added to a solution of the former the red becomes a blue. With the latter the violet becomes blue under the same conditions. A very convenient method is to immerse strips of filter paper in the solution and allow them to dry. One of these can then be dipped into the solution to be tested.

These tests are so practical and so easy of application that they are worth remembering. Both of them are very delicate. The objection urged against them is that certain other substances, as lactic acid in a concentration not usually found even in a diseased stomach, will produce the same color change. Nevertheless, the failure of the change to take place is an undoubted proof that no free hydrochloric acid is present. What I have said is true only in a restricted sense. It is quite certain that careful chemical tests made by an expert chemist may show the presence of acid where these color tests fail. This I know from personal experience. Acid has been found in the chemical laboratory of the University in cases in which I failed to discover it with the color tests. For clinical purposes, however, I believe these tests to be efficient. The reaction for lactic acid—known as Uffelmann's test—is applied as follows: Dissolve a small amount of chloride of iron in a little water in a test tube, and add a few drops of a strong solution of carbolic acid until a purple color is produced. If, now, to this be added some of the filtered contents the purple color will become a canary yellow if lactic acid be present.

This second case is also one of gastric disorder, and is one of extreme interest. He has been kindly brought here by the physician under whose care he is. Unfortunately we have but little time remaining in which to study it together. The paient is a man of 43 years of age. His father and one sister died of phthisis. He has never drank to excess. Except for chronic constipation he was always well and strong until two and a half years ago, when he found that he was losing appetite. This was soon followed by discomfort after eating, with frequent vomiting occurring an hour or an hour and a half after meals, and an increase in constipation. One and a half years ago he had a great deal of vomiting. He has been somewhat pale ever since he came to this country, 24 years ago, and thinks he has been as pale as at present for the last two years. His best weight has been 145 pounds, and his average weight 136 pounds. His present weight is 119 pounds. Last December he had to give up work on account of increasing weakness. The dyspeptic symptoms at that time became more marked, except the vomiting, which has been less. He has had ringing in the ears, accompanied by a sensation of lightness in the head.

When examined a year ago the skin had a pale, light-yellow tint, with but little subcutaneous fat. There was marked pulsation in the vessels of the neck, a soft and somewhat accelerated pulse, and a blowing murmur at the apex of the heart with a sharp second sound. The hepatic and splenic dullness did not seem to be increased. No tumor could be found in the abdomen, even by the most careful examination. The examination of the blood showed 681,000 red blood cells to the cubic millimetre, with a slight increase of the white cells. Five grains of salol were given and the urine tested after a half hour and after one and a half hours, but no salicylic acid was found. This seemed to indicate a possible motor insufficiency of the stomach. Œdema of the feet and ankles was first noticed last June. The urine, however, does not show any evidence of Bright's disease. He improved somewhat through the summer, and the blood-count made last December showed 2,000,000 erythrocytes, *i. e.*, 40 per cent., with a percentage of hæmoglobin of 50. Thus, as you see, the percentage of hæmoglobin exceeded considerably that of erythrocytes; a condition

characteristic of pernicious anæmia. In January there was great weakness and much nausea and retching with pain. Lavage brought up a quantity of foul-smelling mucus. At no time has hydrochloric acid been found in the gastric contents. His condition has certainly been getting worse, for some time past. I have been able to read you only scattered extracts from the elaborate clinical history which his physician has made.

Turning to the patient you notice at once the excessive pallor, yet without any decided emaciation. The pallor has the peculiar faint lemon tint often attending extreme anæmia. There has been no growth found in the abdomen. Moreover, if this were a case of cancer we should probably have had a fatal issue long before this.

On percussion you notice that the loud gastric tympany is very extensive, and his physician has determined, by giving him water and then examining in the way I have described, that the lower border of the stomach extends below the umbilicus. We undoubtedly have here a dilatation of the stomach without any constriction at the pylorous to account for it. Here is a case in which there has been no hydrochloric acid found, yet in which there is no reason to believe in the existence of cancer.

I have shown you this case because it is a very possible example of a rare condition, or at least of one very little understood. It is probably an example of atrophy of the gastric mucous membrane. I have seen only one instance of this disease, and that post mortem, and there are not many cases reported. In this disease you find a combination to some extent of the symptoms of chronic gastritis with those of pernicious anæmia. According to George Meyer, who has seen several cases and carefully studied the subject, the symptoms are dilatation of the stomach, disappearance of the natural secretion, cardialgia and diminution of the gastric movements, while at the same time there is extreme anæmia with fairly good general condition and an absence of marked emaciation. In these cases the microscope shows that the gastric tubules have almost entirely disappeared. There is practically no mucous membrane. You will find a small-celled infiltration with cysts where the membrane should be, with scanty remains of glands here and there. The other layers of the stomach-wall are not much affected, except that the submucosa is thickened. In certain cases an overgrowth of connective tissue occurs instead of the infiltration and chokes the glands, as it were.

Fenwick, Nothnagel, Osler and Henry, Litton, Ewald, Kinnicutt and a few others have reported cases of this affection, with pretty much the same symptoms. The disease is rare—or rather the reported cases are—and the number of instances of it might almost be counted on the fingers of the two hands. The diagnosis is often impossible, ante-mortem and in the case before us, as in all others, can only be made provisionally. Yet I think, with the symptoms exhibited by this man, we are justified in considering this as very probably a genuine instance of atrophy of the gastric mucous membrane. Review with me once more what may be gathered from the man's history and appearance. The extreme pallor and the lack of marked emaciation are characteristic of pernicious anæmia. The condition of the blood is also characteristic of this disease. Then he has marked dyspeptic symptoms with a failure of the secretion of hydrochloric acid. There is evidence of motor insufficiency of the stomach, and there is gastrectasia. This combination of symptoms exactly fills the requirements necessary to justify the diagnosis.

Atrophy of the gastric tubules may produce dilatation, and conversely dilatation may be followed by atrophy. In the latter case the tension and pressure on the gastric wall induces the atrophy. In the former the food, not being properly digested, lies in the stomach, decomposes with the formation of gases, and produces dilatation. This patient at times does not vomit for several days and then fills a large basin with the contents of his stomach.

The treatment of this case is practically what has been already employed; though, in fact, very little can be done in the way of therapy. Arsenic has been given him in the hope that it might act as an alterative. He has also had gastro-intestinal antiseptics, such as naphthalin, aromatics, salol and the like. Bismuth has been tried, as has nitrate of silver, in an effort to control the vomiting. Some dependence can be placed on the administration of predigested foods, in the hope that in this way the lack of digestive power may be supplemented.

Lavage at frequent intervals is certainly indicated, and has been repeatedly tried in his case. Unfortunately, though it gives decided relief, it exhausts him to such an extent that it cannot be employed.

It is said that people living out-of-door lives are hypermetropic.

COMMUNICATIONS.

TRAUMATISM OF THE CHEST.[1]

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In the course of my investigations on thoracic surgery for The Annual of the Universal Medical Sciences, I have been strongly impressed with the lack of knowledge in regard to the injuries of the chest. While this subject has been considered somewhat carefully in my two contributions to that work, there are many practical details of great importance, which are not touched upon, owing to the paucity of data afforded by the very limited reports in this branch of surgical experience.

It is not my purpose now to enter into the minute distinctions of the lesions resulting from violence to the walls and contained viscera of the chest. I ask for the attention of surgeons to the great advantage of methodic treatment of traumatism of the chest.

All those inflammatory processes of a latent or idiopathic nature, which lead to serious effusions primarily, or to suppuration secondarily, within the thoracic cavity, are excluded, as not germain to our present undertaking. In like manner, the very extensive lesions involved in operations for the relief of the above conditions in all stages, do not come within the scope of this paper.

Foreign bodies entering through the trachea, into the bronchi and causing mechanical obstruction, or inflammatory complications, call for consideration, under the general inflammatory impression transmitted to the pulmonary structure.

Blows upon the parietes of the thorax which propagate a shock to the lungs or heart, involving an impairment of functions, or subsequent organic changes, come appropriately under the heading of traumatism, though no superficial contused wound is apparent.

Of course, all violence from without which produces injury to the structures within the chest, should be regarded as the proximate cause of the lesion, whether it be hæmorrhage, congestion or inflammation.

The grosser accompaniments or consequences of violence, consisting in notable contusion of the soft parts and fracture of the bony walls of the chest, are frequently the exciting causes of transmitted inflammation to the vital structures of the thorax.

Among the gravest injuries to the chest are the wounds by firearms and by cutting or puncturing instruments. These generally bring about the entrance of air into the pleural cavity and thus by pressure upon the corresponding lung there is serious interference with the respiratory act. Should the pulmonary tissue be involved in the wound, there is likely to occur emphysema, from the entrance of air into the areolar tissue of its parenchymatous structure, so as to effectually prevent the alternate expansion and contraction of the bronchial ramifications.

The former condition of pneumothorax may be a result of air escaping from the bronchial tubes when wounded, even when the external incision or puncture may be of a valvular nature, which does not admit of the entrance of air from without.

If the external wound is patulous, the ingress and egress of air occurs with each act of expiration and inspiration, inducing the condition of traumatopnœa. This is a most unpleasant result, and introduces a grave complication in the nature of the case.

There is also, most frequently, sanguineous extravasation into the pleural cavity, from such injuries, and if the lung has not become collapsed from the entrance of air, its function of respiration is impeded, if not obliterated, by the blood pressure.

Should the parenchymatous structure be involved in gunshot or punctured wounds of the lungs, there may be emphysema to a greater or less extent, throughout the cellular tissue of the thorax and adjacent parts.

The constitutional or systemic effects of any violence to the thorax depends upon the amount of shock in the first instance or the inflammatory process which is developed subsequently.

The greatest diligence on the part of the surgeon is requisite to avert the immediate fatal result of penetrating chest wounds. Apart from the general manifestations of chest wounds there are local effects from mechanical causes, which require our consideration.

One of the most serious consequences of violence to the walls of the thorax is rupture of the lungs. A fall upon some solid body or the pressure of some heavy weight, while the lungs are greatly distended by closure of the glottis, induces rupture of the pulmonary tissue, with all the serious results of pneumothorax and hæmoptisis. This may occur even without an abrasion upon the surface of the chest; and the history of such

[1] Read before the Surgical Section of the American Medical Association, at the meeting in Washington, D. C., May 6th, 1891.

an accident is the only explanation of the grave condition within the thorax. A forcible impression upon the walls of the chest may fracture the sternum or ribs and drive either inward so as to lacerate the lungs or the heart, leading to immediate or remote serious effects.

One of the grave consequences of an opening through the chest wall is the protrusion of a portion of the lung, constituting a hernia. If this should occur under the observation of a surgeon, he would find little difficulty in returning it and retaining it within by a compress. But most frequently it has been exposed for some hours and has become engorged, so that it is entirely impracticable to reduce it without enlarging the opening in the walls of the chest. This would seem the most feasible mode of relief, if the vitality of the tissue had not been impaired by the constriction. But it is generally held to be safest, either to allow the protrusion to remain and slough away or to assist its detachment by placing an elastic ligature around the neck of the hernial tumor. The edges thus become agglutinated and the lung is occluded. Then may also occur laceration of the lesser or greater blood vessels of the thorax calling for prompt relief, if the injury does not prove immediately fatal.

It has been proven by subsequent observation of the effects, that lesions of the heart have healed and that injury to the coats of the large arteries are not necessarily fatal. But there is no instance on record of a wound of the vena cava without a fatal result. The thoracic duct, in like manner, cannot be wounded with impunity, and the escape of the lymph terminates in death.

While the ligation of the intercostal arteries, the internal mammary and the subclavian is attended with difficulty, the hæmorrhage from them rarely may be controlled, and the patient should not be abandoned to his fate. If blood has accumulated within, it may be withdrawn by suction or its escape may be prevented by position.

Those who have had the largest sphere of observation in this branch of thoracic surgery, will best understand the uncertainty hanging over pulmonary disorders resulting from violence. Commencing with the doubts as to the production of traumatic pneumonia, and running through the abscesses of the parenchymatous structure of the lungs, it is remarkable how little is finally and definitely determined as a guide for practice in thoracic injuries.

It will be found, upon attempting to analyze the reports of such lesions, that quite a variety of opinions are entertained by different observers, and that really no methodic treatment has been adopted generally by the medical profession. I know of no work on surgery which lays down any fixed rule for the practitioner in the management of wounds of the chest.

The contributions to the literature of traumatism of the chest in Holmes's System of Surgery, Vol. I, in The International Encyclopædia of Surgery, Vol. II, in The Reference Hand-book of Medical Sciences, Vol. IV, and in The Annual of the Universal Medical Sciences for the years 1889–90–91, represent fairly the status of this branch of surgery. Those who seek to keep abreast of the recognized data, may learn from these works what has been accomplished for the relief of this class of injuries. It will be noted that there are conflicting views in regard to the proper treatment of some of the consequences of penetrating wounds of the chest, dependent, no doubt, to a great extent, upon the different stand-points from which observations are made. While there is a correspondence, for the most part, among different authorities, in the propriety of closing the external opening in the wall of the chest, when the amount of blood in the pleural cavity is small, contradicting opinions are expressed when it is large.

To define more clearly the attitude of those who have written upon this topic, I may state that individual views of the nature of such injuries, with the steps recommended for their relief, rest very much upon personal observation and not upon the consensus of general experiences by the profession.

There are articles upon thoracic wounds in most of our standard works on surgery, presenting many points of a practical bearing, as viewed by the author. Yet, with such material differences in their application, under the emergency of treatment, as to avail little for the practitioner.

While we should not overlook the writings of former days, it may be stated that little progress has been made in the elucidation of wounds of the chest since the work of Gross and Agnew were presented, and some of the more recent authors, as Wyeth and Roberts, have touched upon chest injuries very briefly. While Senn ignores, with few exceptions, traumatic developments of the thorax, many important data, illustrating the results of gunshot wounds of the chest are given in The Surgical History of the War, published by the U. S. Government, and

the statistics of non-penetrating and penetrating wounds of the chest, therein presented, demonstrates the gravity of the latter as compared with the former in a most conclusive manner. This, however, only confirms the results of the records of military operations throughout the world, showing that about 1 per cent. of non-penetrating wounds of the chest prove fatal, while over 65 per cent. of penetrating wounds terminate in death at an early period after the injury.

One of the practical questions of greatest moment in regard to the hermetical sealing of gunshot wounds of the thorax, remains unsettled.

Experiments upon the inferior animals, commencing with those of Houston in 1728, for illustrating the effects of punctures and incisions into the thoracic cavity, have been attended with such different results upon the lungs, that it is yet undetermined whether collapses ensue directly from these wounds. There is such an intimate relation of the surface of the lungs to the costal pleura, that something must separate them for the occurrence of pneumo-thorax, and hence it occurs that openings are not always followed by this result.

It is held that the falling away of the lung is not a uniform consequence of a penetrating wound of the chest. If the wound is small, or if it is at a distance from the free margin of either lobe, the expanded lung remains in contact with the costal pleura.

The adhesion of the two pleural surfaces is illustrated by an experiment of Surgeon A. H. Smith, in which, in a recently killed animal, an opening was made in an intercostal space, midway between the sternum and the spine. The lung did not collapse, but on making another in the same intercostal space close to the sternum, the outer surface of the lung was observed to slide backwards, though still remaining in contact with the chest walls, until the edge of the lobe came opposite the first opening. Then for the first time the air entered here, and the pneumothorax became complete.

Gordon and McDonald found that with small tubes introduced into the chest, the breathing became quick and laborious, while the lungs had fallen away from the chest walls for an inch. After four minutes, they enlarged the wounds and put in tubes, whose united calibre was twice that of the glottis. The respiration then became very laborious. On closing the wounds, however, and applying friction to the chest, the respiration was restored and in ten minutes the animal was able to walk about. It was killed on the 5th day and nothing notable way found in the chest.

Dr. Northrup reports some experiments on animals, contradicting the statements of Samuel West, that the force of cohesion sufficed to maintain the lung in complete expansion when the parietal pleura was punctured. Further experiments were made in which a dog's two pluræ were fitted with double-flanged canulæ, stoppered with corks. Until the dog recovered from ether the two corks were left in place. When fully recovered one cork was withdrawn, and the dog scarcely suffered dyspnœa on moderate exercise. When both corks were removed the dog tumbled about for two minutes and succumbed to some dyspnœa, which again entirely disappeared on replacing the corks.

These results throw some light upon the practical resort to closure of the external openings into the pleural cavity as a curative measure in cases of penetrating wounds of the chest.

Howard's proposition to the Surgeon General of the U. S., during the war, to test the process of hermitically sealing the external orifices of gun-shot wounds of the chest, met with so much prejudice on the part of the surgeons of the Federal army, that it was used in a limited number of cases. It is also inferred that the conditions under which this measure was tried, were not favorable to its success, as the most grave cases were the subjects. Judging from my own experience of the good effects of closing penetrating wounds of the chest, and from the records of cases thus treated by others, it seems unfortunate that hermetical sealing was not applied on a larger scale, so as to afford the statistics for a final and conclusive decision as to its merits. Independent of the recognized advantages of closure in the lesser accumulations of blood in the pleural cavity, it is held by some, with a show of practical discernment, that in the most extreme cases of thoracic hæmorrhages, the flow of blood externally should be arrested by plugging the orifice, so as to favor the coagulation of the blood within, and by compression upon the lung to prevent further extravasation.

If this course is applicable in the most aggravated condition of penetrating wounds of the chest, as well as to the simpler form in which there is a slight hæmorrhage into the pleural cavity, why may it not prove serviceable in the intermediate accumulations

of blood in the thorax, and thus be applicable to every variety of penetrating wounds of the chest ?

It is not expected that a general rule can be laid down, without exceptions, for the immediate and complete closure of all penetrating wounds of the chest. There must be certain preliminaries observed in the preparation of the patient for receiving the benefits of such procedure, so as to close the orifice with the least blood in the cavity of the pleura, that is possible. Placing the patient so that the opening shall be the most dependent part, with a firm bandage around the thorax, and making the occlusion immediately after the expulsion of air and blood from the wound, by forcible inspiration, should promote a favorable result.

If the case is complicated with emphysema, involving any considerable portion of the surface, plugging the orifice with a condom stuffed with sponges, as has been suggested for the arrest of hæmorrhage from an intercostal artery, will prove efficient in preventing the escape of air into the cellular tissues, and at the same time accomplish complete occlusion of the thoracic cavity.

A comparison of this procedure may be made with that in which the air enters the cavity of the pleura and induces collapse of the lung, thus arresting the flow of blood from the wounded darenchyma, with a tube in the opening, as recommended by Packard, for prevention of emphysema. In this latter, the air pressure is supposed to arrest the bleeding. In the other condition, blood clot presses upon the lung so as to control the hæmorrhage.

The variable influence of the air in the pleura, with more or less air entering the lung by the inspiratory act of the sound side, renders this recourse very doubtful in permanently controlling the escape of blood from a wound of the lung.

On the contrary, the formation of blood-clot within the pleura keeps up a pressure which can be relied on to prevent the further bleeding from the pulmonary lesion. All those who have observed the relief of distressing dyspnœa, by closing an open wound of the chest, concur in its great benefits.

It may be inferred from the favorable progress of cases in which a large accumulation of blood has remained in the pleural cavity, that its gradual absorption occurs. If the air is completely shut off from without, of course, germs cannot enter to set up decomposition in the mass, even should there be a perforation of the bronchia; as it is held that air passing through this sieve-like structure is rendered innocuous.

With the larger death rate from penetrating wounds of the chest, treated without special reference to the process of occlusion, the result is not likely to be more serious from a uniform adoption of sealing hermetically all external openings of penetrating wounds of the thorax. If the worst consequence of this procedure ensues in purulent development, there is open to the surgeons such measures of relief as have been adopted successfully in emphysema from other inflammatory processes.

In this connection, a few cases which have come under my observation, may serve to illustrate the open and closed methods of treating wounds involving the thoracic cavity. Many instances of gun-shot wounds of the chest were brought to my attention as Chief Surgeon of Division during the civil war in this country. But I had no opportunity of following up the subsequent course of these injuries; and would refer to reports of such cases in The Surgical History of the War for the results. I will give, however, an outline of some characteristic cases, occurring in my own private practice and in consultation with others, during the past few years.

One case had a pistol-ball wound at short range between the fourth and fifth ribs, on the right side, in front, and ranging downward. All the physical signs were present, indicating a wound of the right lung, with extravasation of blood into the pleural cavity. It was kept open for a time but closed afterwards spontaneously and terminated fatally.

Another case, in which a ball from a large Colt's revolver, traversed the left side of the chest, entering through the lower border of the pectoral muscle and escaping between the ninth and tenth ribs near their cartilages, instead the pleural cavity. There was a discharge of frothy blood from the posterior wound and the physical signs of extensive sanguinary extravasations into the left pleural cavity.

The heart was perceptibly pressed over to the right, carrying the apex beyond the median line. While no suture was used to close the wounds, they were hermetically sealed by antiseptic dressings; and, notwithstanding considerable constitutional disturbance subsequently, the patient made a good recovery.

A third case was a child, accidentally shot, the pistol ball entering through the ensiform cartilage and ranging upwards,

no precaution was used to close the wound, and the patient died from emphysema.

The fourth case was from a pistol shot which entered just below the ensiform cartilage ranging upwards to the right and lodging above the eighth rib, thus passing through the diaphragm and lower portion of the right pleural cavity. The external hæmorrhage was not pronounced, but the presence of blood in the chest was inferred from the physical signs of dullness upon percussion and diminution of the respiratory murmur under auscultation.

There seemed to be no indication for occlusion of the external wound and it was therefore left open. As there may have existed complications involving the abdominal viscera, the fatal termination on the fourth day cannot throw any light upon the true cause of death.

The fifth case affords an instance of a pistol ball entering the chest, immediately over the heart,traversing the mediastinum and lodging upon the sixth rib of the right side, just behind the posterior axillary line.

The external wound was occluded, and the ball was not removed until after the general shock and slight inflammatory reaction had passed off. The patient made a good recovery by the strict observance of masterly inactivity.

This case, with that preceding, having the ball lodged superficially for several days before removal, seem to emphasize the caution against cutting down and extracting a ball under such circumstances, at the outset.

Time should be allowed for adhesive inflammation to block up the communication with the cavity, as otherwise a direct counter opening into the chest must result.

I recall, in this connection, after the first Manassas battle, allowing a minnie ball, which was impacted in the clavicle and first rib, to remain, but by its extraction the chest cavity should be exposed; but the final result of the case is not known.

The practice of removing balls lodged between ribs, which is inculcated in Agnew's Surgery, without proper limitation, is more honored in the breach than by the observance. It is evident that the immediate extraction of a ball from the border of a rib, after it has traversed the chest, must leave an opening into the cavity of the pleura and aggravate the gravity of the case.

A counter opening in muscular structures for the removal of a ball which is near the surface, does not in the experience of surgeons of large practices, retard the healing process along the line traversed by the ball. But with the conditions presented in a gunshot wound of the thorax, when an opening already has been made by the entrance of the ball it is not good surgery to make another for the extraction, until the wall behind has become solidified.

In illustration of the effects of punctured and incised wounds of the chest, a few examples of knife-stabs, which have occurred in my practice will be added.

A case of stabbing, between the fourth and fifth ribs, in front of the anterior axillary line on the left side was accompanied with localized emphysema. While there was evidence of sanguineous effusions in the pleural cavity the bleeding was profuse externally.

There was a slight dyspnœa upon lying down which was relieved in the sitting posture. The wound was closed by adhesive plaster with a compress and bandage and the patient recovered without untoward symptoms.

It has not been found necessary to use stitches in these wounds inflicted by the thrust of a knife blade, as the coaptation is effected by the above process, so as to hermetically close the opening in the chest. In another case a stab was inflicted between the sixth and seventh ribs over the left side near margin of the scapula, from which blood and air escaped at each inspiration, with considerable accumulation of blood in the pleura, and hæmoptysis.

The external wound was closed immediately after a gush of blood and air from the opening. The patient became more quiet afterwards. This case was accompanied with traumatic pneumonia and marked constitutional disturbance, but ultimately recovered.

A third case came under my observation in which a knife blade entered between the fifth and sixth ribs on the right side, penetrating the lungs and attended with the accumulation of blood in the pleural cavity. There was no very marked dyspnœa, and as the flow of blood externally, gradually diminished with the dependent position of the wound, it was not thought that closure of the opening was indicated.

Inflammatory symptoms soon developed, with subsequent adhesion of the pulmonary and parietal pleura. In the end suppuration of the lung found its way through the external opening. A weak solution of carbolic acid was daily, injected into the suppurating tract, and the healing process progressed favorably, so that there remained,

eventually, but slight impairment of the lung from the injury.

The inference from these cases goes to prove that suppuration is more likely to occur when the incised wound is left open than when it is closed immediately and kept occluded.

A fourth case was seen some days after a stab had been inflicted between the seventh and eighth ribs, and there was a protusion of a small globular mass of pulmonary tissues from the wound. As it had occurred shortly after the injury and was tightly constricted by the margins of the wound in the thoracic wall, the neck of the hernial tumor was encircled with an elastic ligature, as most likely to effect a prompt and safe detachment of the mass. In a few days it separated, and there was no further trouble with the case. If there was any escape of blood into the pleura it was most effectually shut in by the plugging of the opening, and afforded an illustration of the favorable issue of hermetical sealing in penetrating wounds of the thoracic walls.

A RÉSUMÉ OF THE HISTORY AND PRACTICAL APPLICATION OF HYDROGEN PEROXIDE IN SURGICAL AFFECTIONS.

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Hydrogen peroxide was discovered by M. Thenard, a French chemist, in the year 1818. Since which time it has, like many other therapeutical remedies, laid dormant, occasionally being brought forward by some "enthusiast" and its virtues highly extolled for a time. But the drug, unequal to the task of proving all that had been said in its favor, was again and again returned to its stall of oblivion. Within the past few years, it has been introduced to the notice of the medical profession, on account of its antiseptic properties, and apparently has awakened into active therapeutic life.

Most of the preparations or hydrogen peroxide in the market to-day, according to C. T. Kingzett,[1] are made by the process which originated with its discoverer. Physically it is like water, transparent, colorless, odorless, and generally tasteless; occasionally, however, a slight metallic taste may be noticed. The specific gravity varies, generally it is about 1,450. It remains liquid at zero. Chemically, it is one molecule of water in feeble combination with an atom of oxygen, (H_2 0+0—H_2 0_2). That this extra amount of oxygen does not show a strong affinity for the water, with which it enters into combination, is made evident by the rapid decomposition of the compound into its original constituents (water and oxygen) when brought into contact with any surface containing pus. It is this factor of being readily decomposed and setting free nascent oxygen which renders it of practical utility in the treatment of disease.

In looking over the literature of the subject, I find that Dr. B. W. Richardson,[1] in 1862, called attention to the action of hydrogen peroxide in an able article upon the subject, which excited wide-spread interest in the profession at that time and has led to many experiments with the drug, both in surgery and medicine.

It is my purpose to confine myself in its study, entirely to the treatment of surgical affections. Before referring to the results of my own experience, during the last few months, I will briefly allude to some of the most important monographs which have appeared from time to time in our medical journals. C. T. Kingzett[2] believes that the substance exhibits striking antiseptic effects and is capable, even in very small quantities, of arresting the so-called process of fermentation which is originated by living organisms. He further calls attention to the fact that care should be exercised in making the solution neutral before using the same, and yet admits that neutral solutions are by no means as staple as are those of a slightly acid reaction. In closing his monograph he states that the expectations that the compound would prove of peculiar benefit in the treatment of wounds have been amply realized in the practice of several noted surgeons of France, among whom may be mentioned M. Baldy, M. M. Reynard and M. Reau. In summing up his article he further says that, in his opinion, hydrogen peroxide is far superior to phenol, and that it has been demonstrated beyond question that all wounds treated with peroxide of hydrogen have progressed well, healing generally by first intention.

A. E. Prince,[3] speaks most favorably of

[1] C. T. Kingzett, *British Medical Journal*, London, 1882, vol. II, p. 1087.

[1] B. W. Richardson, Tr. M. Loc. Lond., 1862, vol. II, pp. 51–53.

[2] *Ibid.*

[3] A. E. Prince, St. Louis, *M. and S. Journal*, 1884, vol. XLVI, pp. 246–252.

the results obtained with this remedy.

It is as a local therapeutic agent that it has asserted its supremacy and secured the attention of medical pioneers in all departments of medicine. Believing, as he does, that in comparison with iodoform it is inferior as an antiseptic, but, like the latter, it produces little or no irritation, when used about tender organs. C. E. Shelly[1] considers it to possess anæsthetic properties, and at the same time claiming for the drug, not only a pus-destroyer, but that it is an actual stimulant to the surface of wounds. To the carefully conducted experiments of Dr. P. Miguet, quoted by W. D. Bizett,[2] we owe the establishment, on a firm basis, of hydrogen peroxide as a positive germicide. The line of experimentation pursued had the following aim: to determine the quantity of various substances, commonly used as germicides, which, added to a quart of beef tea, would prevent decomposition. Miguet found among a long list of substances used by him, that only two were more powerful than hydrogen peroxide. The following table shows the relative strength, according to his experiments, of the four most powerful germicides:

Biniodide Mercury	0.025 grains
Biniodide Silver	0.03 grains.
Hydrogen Peroxide	0.05 grains.
Bichloride Mercury	0.07 grains.

The results thus obtained, place hydrogen peroxide in the lead of bichloride mercury as a germicide, with the advantage, also, of being absolutely void of any toxic action, while the corrosive sublimate is a most virulent poison. Bizett[3] claims that when the pure peroxide, which is syrupy in consistence, is brought into contact with living tissues, it acts as a direct caustic. Various experiments were made by H. Gifford[4] directly with the *disease germs*, thus testing the germicidal action of the peroxide. Two methods of determining its ability to destroy germs, were used, that of Koch and his own well-known method. The preparation of peroxide used, was that of Chas. Marchand's (15 vol.). Gifford found that the white and yellow cocci, as well as the bacilli anthrax, were killed in exposures of from ¾ to 1½ minutes. It required but ¾ minute to destroy fully developed anthrax spores. He further found that the solution exposed for 40 days, to a temperature of 68–75° killed the yellow pus cocci in from 10–11 minutes. The same solution of peroxide, when diluted with *four* times its bulk, requires an exposure of 30 minutes to kill the pus cocci. If diluted with an equal volume, it kills within ¾ minute. After an experience of six months, J. N. Love[1] sums up the action of hydrogen peroxide as follows: It is a most efficient means of cleansing purulent surfaces, deep cavities, and sinuses, stimulating the healthy process in ulcerating parts. As a destroyer of microbes, a cleanser and securer of comfort, it is of great value as a local application.

My own experience with this drug in surgical affections, during the past ten months, has been most satisfactory. During that time I have used the remedy in the following affections: Abscesses (acute and chronic, of various kinds), suppurating glands, sloughing gangrenous wounds, empyema of the chest, necrosis (general and localized), suppurative otitis media, and wounds of all descriptions. The ages of the cases treated, varied from two to thirteen years. The mode of applying the peroxide was as follows: All cavities, crevices, etc., were syringed with the bichloride of mercury (1–2000, to 1–6000) and then carefully cleansed with the hydrogen peroxide (Marchand's).

At first one volume of this solution was diluted with two to three times its bulk. Later on, I used the full strength. The first effect noticed after applying the peroxide, was the rapid oxidation of all purulent or bloody material, which would cause the distention of crevices, no matter how minute with the oxygen, which was eliminated as a frothy (often yellowish, depending upon the quantity of pus present) bubbling substance. After the oxidation was completed, the wound was always left in a clean, sweet condition, absolutely free from pus. The wounds were then gently dusted over with iodoform and the usual antiseptic dressings of gauze, etc., were applied. On removal of the dressings, a few days later, it was noticed that the wounds were in almost every instance cleaner (especially marked in acute cases), more healthy in appearance and with a decided diminution in the quantity of pus secreted. The thought being suggested, that possibly the bichloride and not the peroxide was instrumental in producing the favorable results noticed, I commenced a series of control experiments. I would, at one dress-

[1] C. E. Shelley, *Practitioner*, Lond., 1884, vol. XXXII, p. 196.

[2] W. D. Bizett, *Atlanta M. and S. Journal*, 1888–9, N. S.

[3] *Ibid.*

[4] H. Gifford, *Med. Rec.*, N. Y. 1888, vol. XXXIV, p. 243.

[1] J. N. Love, *Phila. Med. Times*, 1887–8, vol. XVIII, pp. 362–364.

ing, use simply the bichloride of mercury, following this, at the next dressing, with the peroxide. Thus making actual comparisons in the same cases. After several alternate dressings as above, I found *without exception* that the hydrogen peroxide perceptably diminished pus formation to a much greater degree than simply the bichloride alone.

The belief that iodoform should not be used in conjunction with the peroxide, for fear of liberating free iodine, which, as a direct irritant, would defeat the object in view, is, I believe, erroneous. I found that when a quantity of iodoform was placed in a small receptacle covered with the peroxide solution and then set aside for periods varying from three hours to three days, on being treated chemically for free iodine, with the ordinary starch test, gave negative results. Although one drop of a solution of iodine, on being added to the same solutions, gave a brilliant reaction on addition of the starch.

In all cases in which the peroxide was given a fair trial, I have observed a direct healing effect upon the granulating tissues. It is therefore evident that owing to its oxidizing action on the pus and the diminution of the purulent secretions after its use, it does, either directly or indirectly, cause a destruction of the anthrax bacillus. In concluding my article, I think from the clinical as well as the experimental evidence which has been deduced, we can safely sum up the action of peroxide of hydrogen in the treatment of surgical affections, as follows:

1. Hydrogen peroxide is a positive germicide and a possible stimulant to granulating tissues.

2. Owing to its especial property of eliminating oxygen, it is of unparalleled value in the distention of suppurating sinuses and cavities, especially in the mastoid region or where it is almost impossible to reach unhealthy surfaces by other means.

3. The diluted solution is perfectly harmless and can with safety be used in any quantity.

4. The strong concentrated solution, syrupy in consistence, is a direct irritant to all tissues and should never be used.

5. It possesses healing and cleansing qualities as well as those germicidal in nature.

6. When exposed to light it loses strength; care should therefore be exercised in keeping the bottles well stopped with rubber corks, and in a cool, dry place.

7. Fibrin, cellular tissue and some metals, instantly decompose it. In contact with sugar and starch it eliminates carbon dioxide (CO_2). Albumen, gelatine, urea and cutaneous tissues have no affect upon it, while ammonia, aconite, tobacco and hydrocyanic acid increase its stability.

8. In washing suppurating surfaces, it should be used until oxidation ceases, thus showing a complete destruction of all existing purulent material.[1]

TETANY.[2]

BY E. H. SMALL, M. D.,
PITTSBURGH.

On November 29th, 1890, I was called to see M. B., a fat, healthy-looking, breast-fed baby boy, aged 11 months. His hands and feet were much swollen, œdematous, and of a cyanotic tinge. His mother said that they had been "spotted," *i. e.*, ecchymotic, before I had come. The fingers were strongly flexed at the metacarpal phalangeal joints, while the phalangeal joints were as strongly extended. The thumbs were adducted and flexed. The feet were extended at the ankles as in talipes equinus, while the toes were strongly flexed. Attempts to straighten out these contractions caused great pain. The mother said that at first the child cried a good deal and that his hands and feet were tender and painful. So much were the hands and feet, particularly the dorsal surface, swollen, that I suspected nephritis. The urine, however, contained no albumen. The child had always been strong and healthy, having had no other sickness.

Two days before, Thanksgiving, the child had been given some turkey and cranberries to eat, which had caused indigestion. When I called he had had no satisfactory movement of the bowels for some time. I gave him two one-half grain doses of calomel one hour apart, and twenty drops of the elixir of bromide of potassium four times daily, and told the mother to rub his hands and feet with alcohol and water. The next day he was much better. I directed hot fomentations to be applied to the hands and feet instead of the rubbing with alcohol and water. In a week the child was about as well as usual.

[1] Read before the D. Hayes Agnew Surgical Society of the undergraduates of the Medical Department of the University of Pa., February, 1891.

[2] Read before the Allegheny County Medical Society, March 17, 1891.

Four weeks before his gums had been scored by another doctor. A few days before my visit, the two first teeth had appeared, *i. e.*, at eleven months. The anterior fontanel was larger than normal for his age, and the costo-chondral articulations were rather more prominent than normal. He has an older brother and sister who are perfectly healthy.

When I first saw this case, I thought it to be one of tetany, and its course and termination have proved it to have been such. I had never before seen this disease in a child, but had seen one case in Vienna in a pregnant woman.

Although this disease has doubtless always existed, and although it was described as far back as 1831 by a Frenchman, M. Dance, as occurring in an adult, and in 1832 by another Frenchman, M. Tonnele, as a new convulsive disease of childhood, yet it is but seldom mentioned in the more common medical text-books. The name tetany was first given it by Dr. Corvisart, in 1851. Dunglison's Dictionary, 1874, speaks of "Tetanilla" diminutive of tetanus, saying that this disease is also called tetany.

Dr. Smith, of New York, defines it as "a disease in which there is a tonic contraction of the muscles, commonly those of the extremities, but sometimes also those of the face or trunk, produced by causes external to the nervous system, and usually of temporary duration." This definition shuts out true muscular contractions arising from disease of the brain or spinal cord, in which the contractions are both but a symptom, and not the disease itself. Henoch describes it under the name of "Idiopathischen contracturen" and regards it as a kind of abortive form of convulsions. Dr. Cherdle, of London, says, "Laryngismus, tetany and general convulsions are the positive, comparative and superlative of the convulsive state in childhood."

Causes: Cases are recorded between the ages of six months and sixty-one years. Most cases occur in infancy and childhood; more in males than in females. The most common cause seems to be disorders of the digestive system, as diarrhœa, habitual constipation, worms, and dentition. Charles Warrington Earle, of Chicago, gives a case of a healthy girl two and one-half years old, in whom tetany occurred on the day after she had eaten heartily of fried potatoes. Perhaps my case was caused by the turkey and cranberry sauce of Thanksgiving, two days before.

It may arise in persons who are in poor health from other diseases, as pneumonia, bronchitis, cholera, typhoid fever and dysentery. Exposure to wet and cold has seemed to cause it. Hence, some think it a rheumatic affection. Erb says: "Many physicians have regarded it as an exquisite example of rheumatic disease." In adults, commencing puberty, pregnancy, as in the case I saw in Vienna, and nursing, may cause it. Rhachitis is also regarded as a cause, which may hold in my case, on account of the delayed dentition, large size of fontanel and enlarged articulations.

Symptoms: In patients old enough to describe their symptoms, tetany begins with pain in the head and an uneasy, tingling, burning sensation in the limbs. In children, the objective symptoms are those first noticed. The peculiar shape of the hands and feet, their rigidity, and pain on pressure are the commonest symptoms. Generally the fingers and toes are flexed on the palms and soles, occasionally extended. At times the joints of the hands and feet are also affected, or the elbow-joint—so that the fore-arm appears flexed upon the humerus, the hands upon the fore-arm, and the foot upwards, or else toward the sole. The thighs may be adducted, or flexed, the legs extended or flexed, and the feet extended as in talipes equinus. The contractions are always bilateral and symmetrical. Attempts to straighten out the contractions cause pain. Œdema, with a cyanotic tinge of the back of the hands and feet and occasionally ecchymoses, produced according to Henoch, by the pressure of the contracting muscles on the intermuscular veins, is oft-times present. In severe cases the muscles of the trunk and head may be affected, but this is rare in children. Trousseau's sign—compression of the artery and nerve supplying the concontracted muscles increasing the contractions—can be sometimes observed. The electrical excitability of the nerve supplying the affected muscles is increased, as is also the patellar reflex.

Diagnosis: This may be made out by the peculiar grouping of the symptoms, the characteristic position of the extremities, and the absence of cerebral and general disturbances. Tetanus neonatorum and organic disease of the brain and spinal cord are the principal diseases with which it may be confounded. Tetanus generally occurs within a few days after birth, almost never after the first month; tetany is very rare under the age of one month. In tetanus the muscles of mastication are early affected; in tetany the con-

tractions begin in the extremities, and the muscles of mastication are never, or only in the last stages, affected. In tetanus the symptoms tend rapidly to become worse and worse, generally ending in death; in tetany as a rule, the child is soon well. Tetanus is in some way connected with injury to the umbilicus, or umbilical cord; in tetany, trauma has nothing to do with the case. In organic diseases of the brain the contractions are usually limited to one side, with other symptoms of brain involvement; in tetany the contractions are bi-lateral.

Prognosis: In children, tetany, when uncomplicated by grave disease causing it, almost always ends in recovery, though it may recur. The duration is from a few days to several weeks or months—indefinite.

Pathology: Since tetany in children is so rarely fatal, and then usually from the complicating or causative disease, but few autopsies have been made, and in these no lesions have been found which seem to bear a causal relation to the disease. Herz says that clinical phenomena indicate that the disease is due to anæmia of the cord.

Treatment: When the cause is known, especially when from diseases of the digestive system, its removal will soon be followed by the disappearance of the disease. Bromide of potassium in doses according to age should be used. Chloral and calabar bean are recommended. Envelope the hands and feet in hot fomentations, or use massage with alcohol and water. A child of fifteen months recovered in one week on gr. ¼ zinc sulphate and gr. $\frac{1}{192}$ atrophia sulphate, thrice daily. This is all that is necessary in children. In adults, canabis indica and morphia hypodermically have been used with good results.—(For discussion see page 587.)

Society Reports.

ALLEGHENY COUNTY MEDICAL SOCIETY.[1]

BY W. C. BANE, M. D.

CHLORATE OF POTASSIUM IN PHLYCTENULAR ULCERATION OF THE CORNEA.

It is almost a century since chlorate of potassium was brought to the notice of the medical profession as a remedial agent. In 1795 Dr. Garnet,[2] of England, used it in the treatment of disease. At one time it was lauded as almost a specific in many of the maladies to which mortal man is heir. However, years of clinical experience determined its real value, and it was assigned a place among the topical remedies. Though valuable when administered internally, in some conditions of the system, it has its deleterious effects,[1] having already caused 47 deaths.[2] Its therapeutic properties may be stated generally as those suggested by its chemical constitution and affinities, as a salt excepsionally rich in oxygen, it has without decomposition, the valuable property, *per se* by its mere presence apparently, of oxygenating or aerating the blood, and by so restoring or exalting this inherent quality of the circulating fluid, influencing to a corresponding degree nutrition and functional activity of the various tissues and organs of the body.[3]

In ulcerative diseases chlorate of potassium has been thoroughly tested during the past 40 years both internally and locally. Under Therapeutics, in the *North Am. Medico-Chirug. Review* for March 1858, p. 387, Dr. Dethan regards chlorate of potash "as an especial and incontestible remedy in ulcero-membranous stomatitis. . . . its topical application is sufficient, and in a short time the mucous membrane recovers its normal qualities and functions."

Dr. Gallaher, of Pittsburg,[4] lauded chlorate of potash in mercurial stomatitis, stating that, "'should there be ulceration of any portion of the mucous membrane of the mouth, I direct a weak solution of the salt to be applied to the denuded part several times a day; generally nothing else is required, the cure being accomplished in a few days." As a local application in ulcers of the lower bowel chlorate of potassium in solution gives excellent results, the ulcers healing rapidly.

I presume chlorate of potassium has frequently been used as a local application in diseases of the eyes, but I have only found one record, that of Dr. Landesberg, of Philadelphia, using it as a topical application in epithelioma of the eye-lids.[5]

Ulcers of the cornea, especially the phlyctenular variety, are frequently met with, usually developing as a little papule or pustule on or near the margin of the cornea. They may develop independently or as a

[1] Scientific Meeting, March 17th, 1891.

[2] Duncan's Annals of Med., p. 1797.

[1] Bartholow's Mat. Med., 4th Ed., p. 183.

[2] Dr. Coghill, Trans. Ninth Internat. Med. Cong., p. 26.

[3] Dr. Coghill, Trans. Ninth Internat. Med. Cong., p. 31.

[4] *Am. Journal Med. Science*, July, 1857.

[5] Medical Record, 1882, p. 674.

complication of some existing ophthalmia or catarrhal affection of the nares. A large percentage of the cases are strumous or scrofulous, consequently suffer from nasal catarrh.

The symptoms may vary as to their intensity, but we usually find photophobia, congestion and pain. The variation in the symptoms being influenced by the number of phlyctenules and the constitution of the patient. Constitutional treatment and regulation of the diet, etc., is invariably needed.

The first use I made of chlorate of potassium as a local remedy in ulcers of the cornea was in a case of serpiginous ulcer in Jan. 1882. Case—Mrs. S. C. H., *aet.* 50, constitution feeble. Having exposed herself in doing some out-door work while the weather was rough, that developed an ulcer in the upper, outer quadrant of the right cornea. When I first examined the eye the ulcer was about 2x3 mm. in size. There was photophobia, congestion of the conjunctiva and subjacent tissues; eye-ball, right side of the face and head painful, constitutional remedies prescribed. Locally atropia and weak solution of biborate of soda. One week later the ulcer had doubled in size and depth. Atropia acted as an irritant, morphia disagreed, they were both discontinued. As chlorate of patassium had served me well in ulcers of other portions of the body, I determined to test it on the corneal ulcer, and so directed a 5-grain solution to be instilled in the eye, as warm as could be borne, 3 or 4 times daily. From the time the chlorate was used the ulcer began to heal. Owing to loss of tissue there remained an opacity. Instead of the morphia the patient was given hydrate of chloral, with bromide of potassium, though chloral, when administered internally, acts as an irritant to the eyes in some cases, in this case it did not.

During the past five years of special practice, nearly four years of which I have had charge of the eye and ear department of the dispensary of the Western Pennsylvania Medical College, some 56 cases of ulcer of the cornea have come under my care. About two-thirds of these cases were of the phlyctenular variety. The chlorate has rendered good service in different forms of ulcers of the cornea, but rather better in the phlyctenular than in the other varieties. Not all of these cases were treated with the chlorate, as in some the washed mild chloride was applied, in others the ointment of the yellow oxide of mercury, and in a few a weak solution of the bichloride of mercury.

In the limited experience I have had in the treatment of corneal ulcers and the use of the above remedial agents, my convictions are that the chlorate in about 5-grain solution, used quite warm 3 or 4 times daily is the most soothing, and heals the ulcers more rapidly than any of the other agents tested. True, the warm water itself is of great advantage, but the chlorate is a valuable addition on account of its antiseptic action. It does not prevent bacterial evolution, but it does retard chemical decomposition of organic fluids.

Dr. Lippincott: I never use chlorate of potassium in such cases. We have so many old remedies which will answer the purpose. I have found in my experience that the direct application of very hot water to the cornea is a good thing in these ulcers. The one class to which the doctor refers, generally extremely obstinate, I have treated by the direct application of water at a boiling temperature or steaming. I put a drop of water directly on the exposed cornea so that it steams as it comes out. One drop of the water touches the ulcer, and the effect is marvelous in some cases. The first case I tried it in was a little boy, aged about six years, who had been under treatment for a good while. Treatment had been followed for about three weeks without any material change for the better, and it occurred to me one day to apply the hot water in that way. Before that time could get no dilatation, none whatever, but after the first effort with hot water, the pupil dilated very widely indeed. A good recovery was made. Heat is applied constantly of course, but this was a new application of heat. This hot water treatment, it seems to me, is milder than applying a red hot iron to the ulcer. It seems to destroy less tissues than the hot iron, and it certainly answers the purpose in so far as my experience has gone.

Dr. Bane: I simply wanted to bring this matter out. Hot water is certainly beneficial as Dr. Lippincott has stated, but it seemed to me that the chlorate shows an advantage, at least it has done so in my experience.

Paper by Dr. Small. See page 584.

Dr. Lange: I once saw a tetany follow diphtheria at the time paralysis usually follows. The description Dr. Small has given of his case, fits mine exactly. Tonic contractions of the muscle, lasting in my case ten days. The dorso-cervical muscles were not involved in my case, neither were the muscles of the lower jaw, and the clinical picture as a whole is different from tetanus. At that

time I had not been enlightened by Dr. Small's researches, and scribed this to some obscure nervous affection. I am glad to have heard Dr. Small's pathology, and merely mention my case as his etiology did not include diphtheria. Tetany in the infant is not a very rare disease; it is however in the adult. I do not remember having seen it in an adult. The symptoms given by the doctor correspond to the symptoms in my case. These cases generally recover without treatment.

Dr. Green: At the present time I have in charge a case or two of tetany, and one has been going on a full week. In the first instance, when I was called to see it, they reported that the child had convulsions. The child is 19 months old. There were no convulsions and no indications of convulsions having taken place. None of the usual symptoms that follow convulsions. I did not discover any peculiarity at that time in regard to the muscular contractions. I saw the case again in two days; at that time the discoloratjon of the hands and feet was well marked. Very tender on pressure, a case that might well be mistaken for rheumatism. The general condition of this child, when I saw her, was slight congestion of the lungs with slight bronchitis, and I discovered afterward that there was some derangement of the stomach. I used an injection of warm water, and when the matter had passed from the bowels, there was a considerable number of pieces of potato that had been fried before taken into the stomach. I think my case corresponds almost exactly with the case that Dr. Small has described. On my first visit, I regarded it as tetany, although I was not able to make a diagnosis. The case was well marked latterly.

Dr. Rigg: I would like to ask a question: Whether the doctor has observed any special contraction of the muscles with reference to the epidemic that has been prevailing for the last year or two? I refer to the epidemic called grip. There has been in my hands quite a good deal of contraction of the muscles, especially of the limbs, so much so that persons have been unable to relax themselves, and would generally require a quarter of a grain of morphine, and I have had to repeat that two or three times in an evening before the muscles would relax so that the patient could rest. I was very much pleased with the doctor's paper, and the question came up in my mind whether there might be some connection between tetany and the influenza of which I speak.

Dr. Ayres: This is certainly an uncommon disease. I have never seen a typical case of it. The cases of Dr. Rigg are not due to tetany, they are doubtless of a rheumatic character, caused by the cold or influenza, and possibly Dr. Green's case is similar. In one respect, the doctor's does not quite agree with the typical cases, and that is, that it was of brief duration, about a week if I remember aright. Tetany is paroxysmal, coming and going. If I understand the doctor rightly, his case was just one of tonic contraction, which relaxed and disappeared, and I believe there was no recurrence.

Dr. Stevenson: I think there are a great many diseases that because they are rare and infrequent are not much written of or talked about. Now tetany is a disease that has been very clearly before the profession for thirty years, yet the fact that perhaps we do not see this disease and do not hear it talked about, makes it seem like something new. Some of the speakers have got the idea that it occurs almost exclusively in childhood. I think I will have to differ from that, for Professor Trousseau, when he first discussed the disease, described it as a rheumatic contraction occurring in nursing women. In his hospital he had seen a number of cases occurring in the nursing wards, and he published a description of them. The paper, as I understand it, did not exactly describe the contraction as I understand the disease. This contraction is a spasmodic affair that comes on and may last a few minutes and may last as long as twelve hours, and relax and come again. A contraction that would last twelve hours would be considered one of unusual duration. Now then, the paper, as I understand the question, describes the disease as terminating in a week. This is possible in a miid case which may terminate within a week and not return, though the rule is to have these contractions repeated frequently during a day or several days, if they are sick long enough, in which the patient will seem well, and the condition will occur and be repeated again and again, and the whole duration of the disease is very frequently several months. I saw a case of this character twenty years ago. It occurred in a pregnant woman. She was ten years married; she had given birth to seven children, and as a result she was very feeble and delicate, worn out, exhausted by her frequently recurring pregnancies; she was all the time either carrying a baby or nursing one during these ten years. In about the sixth month of her pregnancy this condition occurred. She

got spasmodic contractions of the toes, and then of the ankles, and by and by it involved two fingers on each hand and the thumb. She would sometimes have these paroxysms come on and last for an hour, and relax for a time, and come again probably for a week, then perhaps for a week or ten days she would be wholly clear of the spasms, then they would recur again, and this condition contined until after she was delivered of her child. I saw another case of tetany in a boy, a colored boy, who lived in a rather destitute condition; the family were exceedingly poor, and lived in a stable simply weather-boarded with no internal lining. They had few bed-clothes and were scarce of food. This boy was driving a wagon and doing chores of different kinds through the town; he was aged about sixteen years. He drove a milk wagon and was out in very severe weather, and only partially clothed. I think the privation and the cold he was subjected to at home and outside, brought on this tetany. He had contractions of his hands and of his feet and contraction of the abdominal muscles and the diaphragm, and he died. He had no lock jaw, he had none of that sensation around the chest that would indicate tetanus, but this spasm of the diaphragm occurred at intervals. He had one or two slight attacks of it on the first day, he had two or three slight attacks of it in the night, and the next morning he had a severe attack of the diaphragm and died.

Dr. Small: As I said in my paper, I do not think this disease is mentioned in the common medical text books. The most I have read on it I have seen in the last two or three years in the *Archives of Pediatrics*. I presume that I so easily made out a diagnosis of this case, for the reason that in three numbers of that journal, Dr. Smith, of New York, published a very exhaustive article on the subject, and he had some pictures, one of which is almost precisely like the appearance of my patient when I first saw her. His article is very exhaustive, and it may be that he got it up simply as regards tetany in children, and although this article I mention speaks of it in a child, I think I mentioned in several places in my paper as to symptoms in adults, although it was written with a view of describing tetany in children. As to duration, the gentlemen seem not to have understood me rightly. I stated it may last a week or a month or indefinitely. As to diphtheria being the cause, as far as I have observed, I have not seen that given as a cause, nor have I seen influenza given.

Selected Formulæ.

LOCAL ANÆSTHESIA FOR SLIGHT OPERATIONS.

For operations upon small abscesses, opening fistulous tracts, or removing superficial growths, it is recommended that local anæsthesia be secured by a spray of the following solution:

℞

Chloroform.....10 parts
Sulphuric ether.....15 "
Menthol..... 1 part. M.

The anæsthesia which is thus obtained lasts from two to ten minutes.

—*Lon. Med. Record.*

POWDER FOR ACUTE ECZEMA.

La Semaine Medical gives the following prescription of Alexinski for this condition:

℞

Oxide of Zinc.....15 grains.
Subnitrate of bismuth.....30 "
Powdered starch .....1½ drachms.
Powdered Lycopodium..... " "

This powder is to be dusted over the parts which are affected, night and morning.

GARGLE FOR ACUTE TONSILLITIS.

℞

Ammoniated tincture of guaiac, } of each 6 drachms.
Compound tincture cinchona, }

Chlorate of potassium..... 2 "
Honey..... 6 "
Powdered gum arabic a sufficient quantity.
Distilled water enough to make 4 ounces.

From one-half to one teaspoonful of this should be used as a gargle in a little water every two or three hours.—*Journal de Médecine de Paris.*

PRESCRIPTION FOR TETANUS.

La Semaine Médicale states thay Mayer employs the following prescription in the treatment of tetanus:

℞

Hydrochlorate of morphine... ⅙ grain.
Chloral.....15 grains.
Bromide of sodium.....20 "

Make into one powder, which should be wrapped in wax paper; give from three to six of these powders each day.—*News.*

INJECTION FOR TUBERCULAR DIARRHŒA.

℞

Olive oil.. ..... 6 drachms.
Guaiacol.....10 drops.
Water..... 8 ounces.
1 yelk of an egg.

—*Journal de Médecine de Paris.*

ANTISEPTIC GAUZE.

For plugging the uterus, Bar (*La Pratique Médicale*, Feb. 17, 1891) has employed with advantage a gauze medicated with retinol iodoform. It is used as follows: The gauze, after being boiled in strong carbolized water and well dried, is dipped in a mixture, the formula of which is not yet very precise; but the one used in the service of Bar consists of—

℞

Retinol	15 drachms.
Wax	1½ drachm.
Iodoform	8¾ drachms.

The employment of this mixture, as applied by means of the gauze, appears to present unusual advantages. Tampons made with gauze, prepared in this manner, are especially useful, inasmuch as they are apt to leave a good coating of iodoform upon the vaginal or cervical service and thus assure complete asepsis of the mucous membrane.

A GARGLE FOR THE RELIEF OF FŒTID BREATH.

The *Revue Générale de Clinique et de Thérapeutique* gives the following prescription for the relief of this condition:

℞

Saccharine, Salicylic acid, Bicarbonate of Sodium,	of each...15 grains.
Alcohol	1 ounce.
Essence of peppermint	10 drops.

A teaspoonful of this is to be placed in a wineglassful of hot water, and used as a gargle, once or twice daily.—*News.*

FORMULA FOR DYSMENORRHŒA.

Monin (*L'Union Médicale*, March 5, 1891) recommends the following for dysmenorrhœa of chlorosis:

℞

Spirits of melissa, Tincture of saffron, Tincture of iodine	of each, 1½ ounces.

Mix. Twelve drops daily, before each of the two principal meals, for two months.

Every eight days, a warm bath, containing three and one-half ounces of chlorate of ammonia.

A PLEASANT VEHICLE FOR CASTOR OIL.

The following mixture is recommended as an efficient means of disguising the taste of castor oil. The only disadvantage is its bulk in proportion to the dose of oil administered.

℞

Castor oil	30 parts
Bitter almonds	2 "
Sugar	30 "
Gum tragacanth	½ "
Orange flower water	10 "
Water	120 " M.

—*American Druggist.*

TOPICAL APPLICATION FOR NASAL DIPHTHERIA.

Raulin recommends that the membrane be detached by antiseptic irrigation and the raw surfaces covered with the following:

℞

Lactic acid	gr. xxx
Carbolic acid	gr. xlv
Pure glycerine	one ounce.

—*Revue Gén. de Clin. et de Thérap.*

ANTIPYRINE IN THE TREATMENT OF GONORRHŒA.

In the *Revue Générale de Clinique et de Thérapeutique* it is stated that Brindisi employs the following solution as an antiseptic lotion in the treatment of gonorrhœa:

℞

Antipyrine	45 grains.
Sulphate of zinc	4 "
Rose water, Cherry-laurel water	of each 2 ounces.

Label, "To be used as an injection."

FEVER MIXTURE FOR CHILDREN.

The following is an excellent fever mixture for a child one year old:

℞

Antipyrine	gr. viij.
Aq. cinnamomi	
Syr. aurantii cort	aa...f3j.

M. Sig. 5j. every two hours until fever subsides.

The antipyrine being soluble, goes into the circulation more rapidly than acetanilide, and so breaks the fever sooner.—*Hollopeter.*

NUTRITIVE ENEMA.

℞

Beef broth (fresh made)	viii ounces
Wine	iv ounces.
Yolk of eggs	ij ounces.
Dry pepsin	j.—iv drachm.

M. Sig. Inject as an enema, in small portions during the day.

—*M. Jaccoud.*

DIPHTHERIA.

Andeer recommends the application every hour or two, night and day, of the following:

℞

Resorcin	grain xlviij.
Glycerine	f3i. M.

A spray of a five per cent. solution of the drug should be used in the room and the following administered internally:

℞

Resorcin	grain x.
Syrup terebinth	f3i. M.

S. A teaspoonful every three or four hours.

—*Centralblatt f. d. Gesammte Therapie* H. 9, 1890.

MIGRAINE.

The following powder is recommended in *La Méd. Moderne* for migraine:

℞

Citrate of caffeine	1½ grain.
Phenacetin	2 grains.
Sugar of milk	4 grains. M.

To be repeated, if necessary, in two hours.

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The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

RETINOL: A NEW SOLVENT AND ANTISEPTIC.

In several recent communications, Dr. F. Vigier calls attention to retinol, which promises to be as valuable an addition to our pharmacopœa as vaseline. This substance was discovered by Pelletier and Walter in 1838, but remained without any special medicinal application until 1890, when Balzar used it successfully in the treatment of blennorrhagia and in syphilitic and varicose ulcers of the leg. His pupil, Barbier, continued his studies and made them a subject of an inaugural thesis.

Retinol is prepared by the destructive distillation of rosin by heating rosin in an iron retort. When rosin is thus acted upon four principal bodies come off—*retinpathe*, isomeric with toluene and benzoene, boiling 108° C; *retinyle*, isomeric with cumene, boiling at 150° C; *retinol*, which boils at 238° C; and *metanaphthaline*, isomeric with naphthaline boiling at 235° C.

Retinol has a formula of C_{35} H_{16}, a density of 0.900, and is of a brown or yellow color depending upon whether it is prepared from brown or yellow rosin. Both possess the same solvent and therapeutical properties, but the yellow preparation is preferable. Retinol is of an oily consistence, greasy, slightly bitter, of a slightly acid reaction due to traces of pinic acid; the odor is faint and peculiar, approaching that of the fir tree; and it burns with a fuliginous flame.

The solvent power of this substance is remarkable, and in addition to this it is unirritating, antiseptic and desicative, and exhibits no tendency to become rancid or in any way decompose. It is, therefore, singularly adapted for a large number of pharmaceutical purposes. Among the substances dissolved by it are: salol, 1–10; iodol, 1–50; naphthol, 1–50; aristol, 1–50; camphor, 1–20; chrysophanic acid, 1–40; cocaine, 1–30; codeine, 1–40, and strychnine, 1–40. It is mixable in all proportions with oil of juniper, carbolic acid, turpentine, alcohol and ether. Resorcin, if dissolved in glycerine, may be mixed with retinol, and so may iodoform if dissolved first in a little ether. Iodol is dissolved but soon precipitates as a resinous mass. Phosphorus is also dissolved and the solution remains unchanged indefinitely. Retinol mixes readily with fats, oils, vaseline, lard, lanoline, glycerine, cocoa-butter, etc., and is thus susceptible of use in the preparation of a vast number of ointments. In cases where a liquid is not undesirable, retinol, owing to its antiseptic properties, can with great advantage, replace these bodies. Preparations can be made in the form of ointments, solutions, capsules, etc. Vigier exhibited to the Société de Médecine Practique capsules of retinol-salol, retinol-creosote and pure retinol.

It has already afforded in therapeutics most satisfactory results, and in a large variety of diseases. Desarenes and Bar-

bier have experienced great satisfaction from its use in otology and rhinology, more particularly in purulent otitis, and to favor the expulsion of mucus and overcome the nauseous odor in atrophic rhinitis. In such cases it can be applied by injection, with a brush, or on a wad. In gonorrhœal vaginitis tampons soaked with retinol give very quick results, and a cure within 12 or 15 days. In gonorrhœa in man the injection of retinol gives immediate relief and acts on the discharge better and more rapidly than any other substance employed up to this time. In both affections it acts as an antiseptic and insulating body and is also valuable because it causes no pain and is well supported.

Phosphorated-retinol has been used with great satisfaction in the treatment of cases in which phosphorus was indicated. Vigier refers to over two hundred observations made by Kassowitz, in the treatment of rachitis and scrofula; and to cases of anæmia, chlorosis, dysmenorrhœa, uterine hæmorrhages, muscular paralysis, progressive locomotor ataxia, neuralgias, neuroses, hysteria, glaucoma and zona, treated by such men as Delpech, Curie, Guèneau de Mussy, Brocq and Duhring.

Retinol-salol has been used in urinary diseases; retinol-creosote in bronchitis, phthisis, etc.; and pure retinol in gonorrhœa. In opthalmology, Hubert has found it of great usefulness, especially in gonorrhœal conjunctivitis, and after injuries or operations. As illustrations of desirable combinations, the following are suggested:

℞ Retinol.....10 grams.
Lanoline..... 5 "
Bi-carbonate of Sodium..0.5 "

℞ Retinol.....10 grams.
White Wax..... 4 grams.
Cocoa-butter..... 6 grams.

℞ Retinol..... 8 grams.
Rosin..... 8 "
Lanoline..... 5 "

℞ Retinol, Rosin, Lanoline, } each... 5 grams.

The last is of very good consistency. To these formulæ may be added such other substances as may be indicated.

In diphtheria the following combination may be employed as a topical application:

℞ Retinol.....15 grams.
Naphthol..... 1 gram.
Camphor..... 2 grams.

In blennnorrhagia in man it may be employed as an injection, associated with resorcine in the proportion of 3 to 100, and it may also be administered in the form of capsules alone, or in combination with salol, etc.

In diseases of the skin, as psoriasis, the following prescriptions have been found to be good:

℞ Retinol.....20 grams.
Glycerole of starch..30 "

℞ Oil of cade, Retinol, } .....equal parts.

To stop itching this pomade is recommended:

℞ Naphthol B..... 5 grams.
Retinol .....50 "
Soft soap.....50 "
Prepared chalk.....10 "

In conclusion, the following may be considered the chief points of recommendation for this substance:

1. It possesses remarkable solvent powers; it is not altered by time or light; it is an excellent and permanent antiseptic; its local application does not give rise to pain or irritation; it is very cheap; and, finally, it unites by solution or simple mixture with a large number of the most important substances employed in therapeutics. These certainly are sufficient to justifiy the belief that retinol will soon render important and extensive service as an antiseptic excipient.

CORRESPONDENCE.

ELECTRICITY AND PELVIC SURGERY.

To the Editor:

Sir:—Dr. McMurtry's communication, in your issue of April 25, pleases me. The recent paper of Dr. Keith, of London, which is commanding the respectful attention of scientific men on both hemispheres, contains a most suitable answer to these objections, which, after all, are mere fragments of self-delusion.

If electricity in the diseases of women amounted to nothing, it would have been moribund long ago. If electricity was not

steadily gaining a strong following it would not be met with such enmity by laparotomists. If electricity had not already assumed a place as the greatest of all conservative measures in the treatment of pelvic disease, it would not evoke such hostility from those who fear that their own métier may cease to exist from the encroachments made upon it.

I reiterate, I have never seen a tumor anatomically cured, but I am only one out of many using electrical punctures. Dr. Keith cures them, so does Marsey—are the statements of these men to be sneered at by those who advance statistics of successful laparotomies and expect to be believed?

I have never seen a peritonitis result from a puncture, and I find that the records of such results in the practices of competent men are exceedingly rare. Competent men have no such results, and hence, I repeat, that all this furor about adhesions set up by electricity, is "foolish talk," quite on a par with the statement that "fibroids are caused by electricity." And yet this strange pathological story formed the subject of a strange address, not long ago, before an enlightened body of medical men.

It is proven as clearly as any surgical fact is proven:

1. That tumors have been anatomically cured.

2. That all painful and dangerous symptoms have been arrested.

3. That tumors have been greatly diminished in size.

4. That many cases of salpingitis have been permanently benefited.

The doctor stands on dangerous ground when citing ectopic pregnancy as a shibboleth of the laparotomist. The opinion of able men, surgeons, too, and big ones, is evenly divided as to the respective merits of electricity and the knife in the treatment of these cases. So I reiterate, what is found written in paragraph 2 of my letter, to which the doctor makes reply. The doctor has seen bad results following puncture—hence he condemns puncture.

I have seen deaths caused by laparotomy—so has Doctor McMurtry. Shall we, therefore, also condemn abdominal surgery? Dr. McMurtry says, "the operation of the removal of the uterine appendages arrests hæmorrhage and brings about atrophy of the tumor in less extreme cases, and has a mortality of only two-and-one-half per cent."

Electricity will do the same thing, without endangering life—hence the mortality becomes almost criminal.

Why cut a woman up, if you can accomplish the same result, possibly a better one, without this anatomical recreation?

Incompetent men will practice electricity and have bad results; incompetent surgeons make abdominal sections and have bad results—shall we say the fault is in the method?

Horatio R. Bigelow.
Philadelphia.

PERISCOPE.

THERAPEUTICS.

THE INTERNAL USE OF MERCURY IN BLENNORRHAGIC RHEUMATISM.

Morel Lavallée (*Le Progres Médical*, April 11, 1891) reports to the *Société Francaise de Dermatologie et de Syphiligraphie* two cases of blennorrhagia successfully treated by the internal administration of mercury. The first patient, suffering from blennorrhagic arthropathy was only relieved by ordinary treatment and by the medicinal waters of Aix. He was cured only after the concomitant syphilitic manifestations were combated by the action of protiodide of mercury administered in pill form. The second case was one of blennorrhagic rheumatism accompanied with muscular atrophy that had resisted all other treatment, but was entirely and rapidly cured by the internal use of mercury. The action of the drug in such cases must be determined by future researches.

The same author referred to a case of poisoning produced by the local application of salol. A patient, with an external otitis of syphilitic origin, introduced into the auditory meatus a large quantity of salol. On next day, *pari passu*, with the appearance of serious constitutional phenomena, a swelling of the auricle, accompanied with a violet hue and vesicles, was noticed, followed by an œdematous angina, resulting from a propagation through the Eustachian tube. The intense dyspnœa produced, was afterwards checked through the influence of emollients. Salol, though well borne by the digestive canal, is, on the contrary, badly tolerated when applied locally.

PATHOLOGY AND TREATMENT OF SYMPATHETIC OPHTHALMIA.

According to Abadie (*Le Progres Médical*, April 11, 1891) who has contributed a paper on the subject to the French Congress of Surgery, sympathetic ophthalmia is a dis-

ease of microbial origin. Following a traumatic injury the wounded eye becomes infected. From the borders of the wound the infection gradually gains entrance into the deep parts, invading the optic nerve, the chiasm and finally affecting the opposite eye. Under such circumstances, the external wound should be cauterized by means of a galvano-cautery, and an injection made into the vitreous of the diseased eye of one drop of a solution of corrosive sublimate (1 to 1,000). After a few days this injection should be repeated if necessary. By this means we are able not only to arrest the development of sympathetic opthalmia, but also to avoid the certain loss of the wounded eye. This treatment is especially applicable in the recent forms of sympathetic ophthalmia when the question of saving the primitively wounded eye should be taken into consideration. When, however, the ophthalmia is provoked by the existence of a painful stump, for example, then, the conservative treatment presents no advantages. In such cases enucleation constitutes the best treatment and should be preferred; and here, again, mercurial rubbings in large quantities and prolonged for a considerable time, should be associated with surgical interference.

HOW TO APPLY SERUM INJECTIONS IN THE TREATMENT OF TUBERCULAR PHTHISIS.

Héricourt and Richet have observed that the introduction of blood from an animal refractory to tuberculosis, as the dog, into the economy of one susceptible to the disease, tends to retard the development of the malady. Lépine (*Lyon Médical*, March 1, 1891) has further studied the subject, and from a series of experiments, especially as to the method of making the injections, has arrived at the following conclusions, which have been communicated to the *Soc. des Sciences Médicales de Lyon:* 1. The liquid could not be introduced into the peritoneum, owing to the difficulty of applying asepsis. 2. Other things being equal, injections of 2 or 3 kilogr. can be introduced. 3. The serum, and not the blood, was the substance injected as it is the serum which possesses germicidal powers. 4. The serum of goat's blood was employed in preference to that of the dog, as that was less offensive to the human blood-corpuscles. From 50 to 100 grammes, in divided doses, were injected hypodermatically every two days. This method was well borne by the patients.

ON SULPHATE OF ZINC IN DIPHTHERIA.

As an experiment, Dr. Kilmer added to a gargle (an ordinary tumblerful of water) about fifteen or twenty grains of sulphate of zinc. Upon my visit the next day, my surprise was great to find that about one-half of the membrane (diphtheritic) had disappeared from a boy's throat, while the diphtheritic membrane in his sister's throat had enlarged to about half an inch in diameter, and the throat in every way looked worse. There was no sulphate of zinc in the girl's gargle. The same treatment was continued another twenty-four hours, at the expiration of which time the exudate had entirely disappeared from the boy's mouth and throat, while in the girl's throat it had again at least doubled in quantity, and the general appearance of the throat was much worse. Believing then that the zinc sulphate was entitled to credit for the boy's rapidly improved condition, the girl was supplied with a gargle identical with that which the boy had been using, and twenty-four hours later not only had the diphtheritic membrane disappeared entirely, but all the swelling and distress had gone also, and both patients were now convalescent, and speedily recovered.—*Med. Record.*

DANGERS OF SULPHONAL.

Although sulphonal is probably one of the safest, as it is one of the most efficacious, among the hypnotics recently introduced, the series of cases published by Bresslauer of Vienna show clearly that it has certain dangers. The degree of peril is difficult to estimate, as the patients were lunatics, and were also apparently feeble; but the fact is significant that out of seventy-seven patients who were treated with the drug, no less than seven showed serious symptoms, and in five of these there was a fatal termination. It ought to be mentioned that the patients had been taking the drug for a considerable time in good doses, and had borne it well until symptoms of disturbance set in, these being great constipation, dark-brown urine, slow, or in some cases rapid but feeble pulse, discolored patches resembling purpura on the limbs, and great prostration. In the cases which ended fatally the cause of death was heart failure, with œdema of the lungs. —*Lancet.*

THE ACTION OF HYDRASTIN UPON THE VASCULAR SYSTEM AND THE UTERUS.

Authorities are divided upon the mode of the action of hydrastin on the vascular sys-

tem. Some have observed an increased blood-pressure and slowing of the heart's action, whilst others affirm that the drug paralyzes the vascular system. The uterine contractions provoked by hydrastin are due, according to some, to the direct stimulation of the muscles and of the cardiac nerves; according to others, to the stimulation of the central nervous system. It was for this reason that Serdsteff had undertaken new experimental researches upon frogs (sixty-two experiments) and upon warm-blooded animals (fifty-seven experiments). These are the results obtained by this experimenter:

Given in a small dose hydrastin provoked, in frogs and in warm-blooded animals, slowing of the heart's movements, owing to a stimulation of the inhibitory apparatus, both peripheral and central. Small doses always increased blood-pressure; by larger doses it was lowered.

These differences depended upon the state of the vasomotor centre. Small doses were not followed by convulsions, and did not paralyze either the respiration or the heart. He thinks, then, that if some observers have verified the paralyzing action of hydrastin upon the vascular system, it must be those who have given larger doses of the remedy. Regarding the influence exercised by hydrastin upon the uterus, the voluntary or rhythmic contractions of this organ would be increased in their strength, their number, and their duration.

Hydrastin does not act *directly* upon the neuro-muscular apparatus of the uterus, but *indirectly* by the intervention of the central nervous system, and that very probably by way of the vasomotors.

In sustaining these obtained results the experimenter counsels the use of hydrastin in all those cases of hæmorrhage where it would be, for one cause or another, unwise to await strong contractions of the uterine muscles, and where, it is of the greatest importance to attack the bleeding through the vessels of the uterus.—*Les Nouveaux Remedes.*

IODOFORM IN CHRONIC EYE CONDITIONS.

Dr. G. Walter Barr says: The use of iodoform as a dry antiseptic dressing has always had a tendency, in my hands, to produce exuberant granulations. This suggested the use of the same substance in cases where it is desired to stimulate cell-growth, and naturally some chronic conditions of the eye offered an attractive field for investigation.

It seemed evident that to attain antisepsis and the stimulating effect of the drug, seen in open wounds, it must be continually kept in contact with the part; this ruled out of the question the almost discarded use of iodoform pencils as rapid, repeated applications; the pure iodoform is much too irritating for use in the eye; and an ointment of proper strength best fulfils the conditions. The strength of the ointment should vary with the amount of stimulation desired and the susceptibility of the eye, for there is an individual factor of susceptibility which is far from constant. From 1 to 5 grains of iodoform to the ounce of vaseline has been found most often of greatest use. *En passant,* it is hard to find vaseline now which is free from some irritating substance (probably acid) left in it in the process of refining. This applies to unguentum petrolei, under whatever trade-marked name it is sold.

The first case in which I used the iodoform ointment was a girl aged 15, who had barely light perception in one eye and an anterior staphyloma in the other. There had been conjunctivitis from infancy, and the entire cornea was opaque in the eye which did not have the staphyloma. Before operating on the latter, it was highly desirable to get the best possible vision in the other eye. The ordinary practice had been exhausted, and a 4-grain iodoform ointment was placed in the eye three times a day. In a fortnight the vision was perceptibly improved, and in three months she could count fingers. This eye never got much better, perhaps partly due to a pathological condition of the optic nerve from a long disuse—from early infancy—although the cornea became gradually clearer. The staphyloma was operated upon, leaving a triangular piece of cornea, about 1.5 millimetres in dimensions on each side, and an iridectomy performed behind it. The corneal remnant at once became opaque in the process of healing; there was total blindness in the eye. A 4-grain iodoform ointment was applied twice a day, sufficient being placed on the everted upper lid to last until the next application. In three months the corneal remnant had so cleared up that she could recognize faces in her limited field of vision. I have never had any but the most gratifying results in treating pannus, however deeply the cornea is affected, by the use of iodoform ointment; the sight has not always been completely restored in the worst cases, but vision has been doubled or improved even more. The length of the period of treatment seems to be in direct ratio to the age of the pannus, but

several months are nearly always required in cases of long standing. The ointment should be applied often enough to keep the cornea constantly covered with it.

In trachoma, the efficacy of iodoform ointment depends on the amount of stimulation required and the strength of the ointment. By varying the strength of the ointment, it seems to me that greater nicety of effect can be obtained than in any other way. Trachoma of years' standing with large granulations, which are best adapted to the compression treatment, quickly succumbs to a 4-grain ointment, applied twice a day. In trachoma and chronic conjunctivitis the iodoform ointment may be used to advantage in conjunction with other treatment, where stimulation is not contra-indicated, by applying it at bed-time; the result is a cessation of the gummy or postulating condition of the lids in the morning.

In indolent ulcers, the results have been as encouraging as in pannus. Sometimes it has been necessary to touch the ulcer with cupric sulphate, but in two cases nothing but the ointment was necessary. In all the ulcer healed much more rapidly when the iodoform ointment was used, and usually without cicatricial cloudiness. Continued use of the ointment soon removed all marks of the ulcer and left the cornea perfectly clear.

The above is a generalization of the results in over a hundred cases of trachoma (mostly of very long standing), thirty cases of pannus, and a dozen cases of corneal ulcer. They seem to me to justify a further trial by others. The points to be remembered are, that much depends on a proper strength of ointment in each case, and that it is not adapted to acute conditions.

Regarding the *modus operandi*, those who are not confirmed microbe maniacs will attribute the action to the cell stimulation seen in the use of iodoform in chronic ulcers and like conditions. Of course, in trachoma and chronic conjunctivitis, something may be due to the antiseptic action of the iodoform, but hardly in pannus, or, perhaps, in corneal ulcer.—*Ther. Gaz.*

HYPERKINETIC ACTION OF CAFFEINE IN LARGE DOSES.

In the section of Pharmacology of the Tenth International Congress held at Berlin, Dr. Petreskn, of Bukaresh, made an interesting communication on the subject of the hyperkinetic action of caffeine in large doses. He prescribes the drug in the following formulæ:

℞ Caffeine.....1·0–2·0 gram.
Ag. melissæ.....140·0 "
Spiriti Vini
Syrupi simplicis....aa....30·0 "
M. Sig. One tablespoonful every half hour.

If necessary, this amount may again be taken within twenty-four hours. The formula for hypodermic injection of the drug used by Dr. Petreskn is as follows:

℞ Caffeine
Natr. Salic. vel benzoica...aa...0·25 gram.
Ag. destill.....1·0 "

The solution can be made with the aid of heat, and the whole amount should be used for one injection. In the majority of cases, the author prefers to give the drug by the mouth, never having observed any digestive disturbances to follow its use. Subcutaneous injections were only resorted to in extreme cases where an immediate action of the drug was desirable, and in which other injections were also called into use.

Petreskn classes caffeine among hyperkinetics of the greatest value for the nervous and muscular systems; it is also a stimulant to the vagus, and its action is allied to digitalis in this respect. He has used the drug successfully in typhoid fever, pneumonia, acute articular rheumatism, erysipelas, influenza, measles and several cardiac affections. His experience lead him to the following conclusions:

1. The therapeutic dose of caffeine is from 2 to 4 grammes daily, by the mouth, or 2 to 3 grammes subcutaneously in doses of 0.25 every two hours.

2. Given in these doses, caffeine is a powerful hyperkinetic both for the nervous and muscular systems. The effect of such a dosage shows itself in a strengthening of the cardiac contractions, together with a slight acceleration, the pulse becomes fuller, the arterial tension increases, the temperature decreases, diuresis increases, and the general feelings of the patients are greatly improved.

3. By means of its hyperkinetic action on the heart and vessels, caffeine becomes the most valuable substitute for digitalis. In certain cases caffeine is undoubtedly preferable to digitalis, and for two important reasons: first, its rapidity of action, especially when given hypodermically, and secondly, on account of the absence of accumulative effects, which permits of its continued use for a long period.

4. Caffeine is invaluable in the treatment of primary or consecutive heart failure. It is also valuable in nervous prostration or in congestive conditions in which the nerve

centres are affected, and which are caused by disease or intoxication.

5. The diuretic action peculiar to caffeine, makes it valuable in the dropsies incident to heart failure, as well as those of a purely renal origin.—*Wiener Med. Presse.*

THE TREATMENT OF PULMONARY TUBERCULOSIS BY HYPODERMIC INJECTIONS OF IODOFORM.

Gavoy, in the *Gazette Médicale de Paris*, details his method of treating pulmonary tuberculosis with iodoform. Morning and night, a hypodermic injection of 30 minims of the solution, of 1 part to 100 of iodoform in oil of sweet almond, is given.

No febrile reaction occurs, and the results are very good. The cough diminishes rapidly, and the characteristic muco-purulent catarrh first becomes more liquid and then ceases. The character of the voice is also improved, and the lungs become more permeable to the air. Inspiration is increased in depth, and the râles become more moist. Other symptoms showing the favorable influence of this treatment are a decrease in the night-sweats and a renewal of the appetite. The therapeutic influence of iodoform over carious bone and pus-corpuscles seems to point to the fact that it exercises an analogous action upon tubercular processes accompanied by resolution and necrosis of the lung.—*Med. News.*

TREATMENT OF MALARIAL HÆMATURIA.

Dr. B. W. Mason has treated five cases of malarial hæmaturia, two of these cases were very bad, one died, the other three cases were seen early and all recovered.

One patient was a girl nine years old, who had been having chills for more than a year. Skin very yellow, pulse 135, temperature 102, bowels had been moved by a dose of salts, the bladder acting every hour or two, passing dark blood. The child complained of pain in head, back and bones of lower extremities. She was vomiting almost incessantly, and the dyspnœa was so great that she had to be raised to a sitting posture and fanned frequently; this was, to him, an alarming symptom. He at once put her upon one grain doses of calomel every two hours until the bowels were acted upon; for the nausea gave Horsford's acid phosphate, which acted nicely. He gave tincture of iron three drops, Fowler's solution one drop every two hours, and spirits turpentine four drops every two hours. This treatment was commenced Tuesday at 11 o'clock A. M. At 8 o'clock P. M., the urine began to look more natural, the skin to clear up, the nausea to subside. The last trace of blood in the urine disappeared at 9 o'clock A. M. Wednesday. Not a trace was to be discovered in discharge from the bladder two hours later. The patient began to improve and was discharged on Saturday, so far recovered as to sit up a little. He left a tonic for her and she made a quick and nice recovery. He thinks the iron and arsenic treatment will do.—*Atlanta Med. and Surg. Jour.*

TREATMENT OF BRIGHT'S DISEASE.

The *Rev. de Clin. et Therap.* publishes the following methods for the treatment of Bright's disease:

(1.) *Classic Method.*—The climateric prescription consisted in the avoidance of dampness and sudden changes of temperature. As to diet, rich or irritant articles of food were avoided, as were also eggs. A pure or mixed milk regime was followed, and such articles as wine, whiskey, liquors and beer were entirely prohibited.

(2.) *Senator's Method.*—All white meats and pork are allowed, and the use of vegetables and starchy articles of food, fruits, fats and milk advised. Senator also recommends the employment of wine mixed with water.

(3.) *Semmola's Method.*—The author observes the preceding treatment and besides advises the employment of the following solution to be given in the course of twenty-four hours:

Iodide of potassium	15 grains.
Phosphate of sodium	30 grains.
Chloride of sodium	75 to 90 grains.
Water	20 ounces.

(4.) *Bamberger's Method.*—Besides a milk diet, tonics and ferruginous remedies are employed. The author highly recommends the following preparations: (1) Pills of perchloride of iron. Of these pills three to six are given per day. Each one contains:

Perchloride of iron	½ of a grain.
Pulverized menyanthe (Buckbean)	¾ of a grain.
Extract of gentian, a sufficient quantity.	

—*Univ. Med. Mag.*

MEDICINE.

SOME REASONS IN FAVOR OF THE NON-SPECIFIC PROPERTIES OF GONOCOCCUS.

Erand, of Lyon (*Le Progrès Médical*, April 11, 1891) gives some reasons to sus-

tain the non-specific properties of gonococcus. According to the author, there exists in the normal urethra, a diplococcus, which, under the influence of coloring materials, behaves like the so-called gonococcus. Both secrete a diastase, which, injected into the cellular tissue, produces no deleterious effects; but which, introduced into the testicle of an animal, gives rise to orchitis, to a suppuration of the vaginal sac, followed by atrophy of the testicle. The interference of microbes is not absolutely necessary for the production of the suppuration. From a number of experiments performed, to determine this point of specificity in regard to gonococcus, Erand concludes that it is the ground, so to speak, and not a special property, upon which the virulence of the so-called gonorrhœal germ depends.

ALBUMINURIA IN BLENNORRHAGIA.

In a communication upon this subject, presented to the *Société Fran. de Derm. et de Syphil.*, Balzer (*Le Progrès Médical*, April 11, 1891) has sustained that in acute blennorrhagia, whether simple or complicated with cystitis or orchitis, the co-existence of albuminuria is frequent, generally in the proportion of 12 per cent., although this may be caused also by previously existing complications. This albuminuria may assume an intermittent type, and only lasts a few days. In such condition, the balsamic medication seems to exercise an unfavorable action. It is possible that many of these cases of albuminuria may be due to the existence of venal lesions, but they also form a part of infectious processes. It is, therefore, of the utmost importance to examine the urine for albuminuria in all cases of blennorrhagia.

THE ASSOCIATION OF SYDENHAM'S CHOREA AND RYTHMICAL CHOREA IN A HISTORICAL FEMALE.

J. Seglas (*Le Bulletin Médical*, April 12, 1891) reports to the *Société Médicale de Paris*, the case of a young girl, who, at fifteen years of age, suffered the first stroke of Sydenham's chorea. At nineteen she had a second attack of the same malady. The disorderly movements were general, but most prominent on the left side of the body. On this side the sensibility was diminished, as shown by simple contact and even pricking; the same thing was noticed with regard to muscular sense. There was a slight ovarian hypersthesia, but no symptoms of previous rheumatic nature were observed. The heart was apparently intact. Two months afterwards, the choreic movements, greatly improved, were scarcely noticeable on the left arm. It was noticed at the time that these movements had changed in character: they were no longer inco-ordinate but had assumed a small rythmical amplitude, so to speak. Eight days later, these movements of the left arm exhibited the type of a malleatory chorea. In the intervals, the patient suffered from nerve crisis, such as left hemianasthesia, ovarian hypersthesia and a possibility of being hypnotized.

To sum up, this patient was laboring under Sydenham's chorea, accompanied with some hysterical symptoms. Afterwards this chorea was replaced by the rythmical form, the hysteria becoming, at the same time, pronounced. The author does not believe that in this case we had to deal with two diseases, but only with one affection, the hysteria having assumed, successively, the two different types of the original disease, that is, that of Sydenham's and that of the rythmical chorea.

EFFECTS OF TUBERCULIN ON MONKEYS.

M. Henocque (*Rev. de Thér. Méd Chir.*, March 15, 1891) has recently tried the effect of tuberculin in a monkey which presented no symptoms of pulmonary phthisis. Two days after the first injection the animal, which had exhibited the characteristic reaction, presented dullness and a few râles at the right apex. After the third injection the dullness was more marked on the right side, and began to be perceptible at the left apex. Soon all the symptoms of acute phthisis manifested themselves with intense fever, the animal dying ten days after the last injection after losing a tenth of its weight during that time. The total amount used was 6 milligrammes of the diluted fluid. On post-mortem examination, four tuberculous nodules of the size of a pea were found in the right lung, and caseous pneumonia involving two-thirds of the organ in the left. In both cases the tuberculous lesions were surrounded by a zone of very intense red hepatisation. Pieces of the caseous tissues were injected into two guinea-pigs, in one after mixture with sterilized water, in the other with diluted tuberculin. Both animals showed signs of cutaneous and glandular tuberculosis.—*Brit. Med. Jour.*

Grass juice, and bottles of electricity, are the agents which a Paris quack announces as a certain cure for tuberculosis.—*Exchange.*

CONTRIBUTION TO THE STUDY OF HYSTERICAL BLUE ŒDEMA.

Dr. Emile Boix (*Nouvelle Icon. Salpetrière*) recently reported a case of this nature. which is of much interest:

L. G., aged 35, cook, Dec. 13, 1890. Headache, but no alcoholism in family. The patient had *incontinence of urine in bed until he was* 14 *years old;* had rheumatism when in the army and twice erysipelas of the face. This was his fourth attack of blue œdema.

The patient is a blonde with blue eyes, and a feminine expression. He says that his natural disposition is very lively, but that his present trouble has made him melancholy.

Sensibility to the brush completely lost on the right side; sensibility to pain and heat very much diminished. The anæsthetic zone was more marked at the level of the right scapula.

There was a concentric retraction of the visual field on both sides, more marked in the right eye. Right, 55° on the outside, 40° on the nasal side; a second examination gave us 40° on the outside; the left eye is 70° on the outside and normal on the nasal side.

The first thing observed was the exaggerated œdema of the patient's right hand. It has the aspect of a total phlegmon of the hand. The œdema occupies the whole hand, but especially the dorsal aspect which is enormous. The coloration of the hand is habitually violaceous with deeply colored places and others whiter; it has the appearance of marble. The cyanosis is much more marked towards the end of the fingers, but it varies very much in the course of the day, without apparent regularity in its variations, and without being altered by external influences; the hand becoming dark-red with places more or less light, and cyanotic points; at other times very pale, at others entirely cyanotic; at other times it is rosy. The position of the hand makes no difference either in the œdema or in the coloration.

The tumor was hard, but the finger made some depression, from which the swelling recovered with great rapidity, the depressed point being white and the coloration, violet or red, being deepened after removal of the pressure.

The affected (right hand) was colder than the sound hand, the difference in temperature varying greatly. On Dec. 13, at night, the temperature of the affected hand was 64° F., that of the sound hand being 81° F. at the same time, On the afternoon, however, of the same day, the conditions varied, the affected hand having registered 94° F. and the sound hand 76° F. This elevation of temperature was not accompanied with any special redness. This elevation was but for a short time; an hour after we find the right hand colder than the other. The patient called this *a stroke of madness in his hand.*

The anæsthesia in the right hand was absolute for all methods, even deep sensibility was abolished. This anæsthesia was arrested at the wrist-band. The prick of a pin on the œdematous part produced a small drop of black blood, but the flow did not persist.

The arm-pit was the seat of an exaggerated secretion of sweat; in a few hours the night shirt of the patient on that side would be soaking to the waist.

If we analyze the stigmata presented by L. we cannot have any doubt as to the existence of hysteria in man; the narrowing of the visual field and the ease with which hypnotism can be produced show this.

In conclusion: the chief singularity we observe was in the temperature of the patient's right hand; an extreme variation, compared with the left hand, of 16.4° (29.5° F.). It is true that this variation was not produced at once under our eyes, but we have had the man at our disposition only three days. We intended to employ various measures—such as the electric current, etc., for the cure of our patient, and we did, in fact, hypnotize him, hoping to get some effect from suggestion. The next day, however, L. insisted upon leaving the hospital at once and would give no reason for his departure.

We believe he was afraid that his œdema would disappear—for we had given him assurance that we were perfectly able to cure him—and he would be deprived of an infirmity which rendered his entrance to a hospital easy.

Two days after the above disappearance he entered the Pitié, and we find, also, that he has been in the Charité.

It is possible that L. can make his œdema appear at will, as a patient of M. Féréol can, who produces when he pleases various imitations of diseases of the skin, such as scarlatina, variola, etc., which mislead the physicians.

L. did not stay long at the Pitiè, he did not think they showed enough solicitude for his case there; and *that* is worth something as a hysteric note.

PATHOGENY OF DIABETES.

Bouchard has stated that there are no fewer than twenty-seven theories of the cause of diabetes. None are entirely satisfactory. The most important fact discovered in recent years is that diabetes follows extirpation of the pancreas in animals (V. Mering and Minkowski), and numerous clinical observers have since then noted pancreatic disease in conjunction with glycosuria. V. Mering and Minkowski, with most praiseworthy scientific reserve, have abstained from formulating any theory to explain the undoubted fact they have put upon record, and Lépine (*Rev. Scientifique*, February 28, 1891) has discovered an additional fact in relation to pancreatic extirpation and diabetes, which must be taken into account when the true explanation of these phenomena is forthcoming. Healthy blood possesses what he terms glycolytic powers. Fresh blood contains a certain percentage of sugar; if the same blood be allowed to stand at the body temperature for an hour before it is examined, a very considerable portion (20 to 40 per cent.) of this sugar has disappeared. This number (20 to 40) may be taken as the glycolytic power of healthy blood. It is considered that this sugar-destroying power is due to a ferment present in the corpuscles, but especially in the white corpuscles, as the glycolytic power of the chyle is as great as that of the blood, and the portions of the blood richest in leucocytes are richest in the ferment, which may be dissolved out from them by salt solution. In cases of diabetes the glycolytic power of the blood falls to 5, 2, or even 1. In animals without a pancreas there is a similar drop. The pancreas thus appears to be the chief source of the ferment. Lépine believes that the activity of a pancreatic cell is bipolar; by its internal extremity it pours the pancreatic juice into the ducts of the organ, and by its basal extremity it pours into the venous blood and lymph the glycolytic ferment. The absence of diminution of the sugar-destroying power of the blood dependent on pancreatic extirpation or disease is thus a factor, and perhaps an important one, in the causation of an over-abundance of sugar in the blood, and will certainly have to be reckoned with before the true pathogeny of diabetes is understood.—*Brit. Med. Jour.*

Dr. Caius, some four hundred years ago, when an old man, tried to regain his youth by sucking the breast of a woman.

SURGERY.

MICROCIDINE: A NEW ANTISEPTIC.

In representing Berlioz, of Grenoble, Polaillon has presented to the *Académie de Médecine* (*Journal de Médicine de Paris*, April 12, 1891) an experimental and clinical study of the new antiseptic: *Microcidine.* Berlioz believes that all the known antiseptics possess more or less disagreeable properties, and cannot be manipulated carefully enough, owing to their insufficient solubility in water; they are such as the salts of mercury, phenol, naphtol, thymol, salicylic acid and boric acid.

He has thus found, from a research upon the subject, a new medicament which, while it possesses feeble toxic properties, is a true caustic, perfectly soluble in water and has no odor or taste. Such a drug is microcidine, a combination of naphtol and soda.

It destroys the staphylococcus albus and the microbes of anthrax in solutions of 0·20 grammes per 1000; it acts similarly on the bacilli of Eberth and the baccillus coli-communis in the strength of 0·25 grammes per 1000. It also kills in the course of *one minute*, in solutions of 5 grammes per 1000, the microbes of saliva, of the pus of osteomyelitis and of puerperal septicæmia. Its antiseptic power is ten times greater than that of phenol, and twenty-eight that of boric acid.

Its minimum fatal dose for rabbits and guinea-pigs, is 0·164 grammes administered intravenously and 0·35 grammes by hypodermatic injection, per kilogramme of the body-weight. It is, therefore, less toxic than naphtol itself.

The solubility of microcidine in water is very pronounced; one gramme of it is readily dissolved in three cubic centimetres of water. In ordinary therapeutics, and even in very large doses, microcidine does not exercise a powerful caustic effect; it does not irritate wounds, and as, on the other hand, it has no odor, it may be employed for toilet purposes. Neither has it any deleterious action on surgical instruments or on clothing.

Microcidine lowers rapidly in animals both normal and febrile temperatures, and is eliminated by the kidneys, rendering the urine non-putrefactive.

Microcidine has been employed with success in a large number of infected and surgical wounds. It may be used in solutions varying from 5 to 3 parts per 1000.

THE TREATMENT OF SYPHILIS.

The following is the therapeutic method which I ordinarily employ in the treatment of syphilis:

As I have already stated, I do not generally give mercury until the onset of the secondary symptoms, although I have carefully used the mild mercurial preparations in the local treatment of the primary lesion.

According to the intensity of the phenomena observed, I prescribe to the patient daily mercurial rubbings, in doses varying from two to four grammes (30 to 60 grains) for a period of fifteen days; then I allow the patient to rest from two to three weeks, according to the case, and I continue in this manner during the first ten months.

In the course of the periods of treatment and similarly during the intervals, I am careful as regards the local treatment of syphilides by means of the mild preparations of mercury. For cutaneous syphilides, I employ the drug in the form of ointments, solutions or lotions.

In certain forms of rebellious cutaneous syphilides, I advise general baths, in each of which may be put seven grammes (105 grains) of corrosive sublimate. It will be unnecessary for me to say that I particularly insist in the observance of mouth hygiene, on cleanliness, general hygienic measures, and that I always endeavor to build up, as much as possible, the system of my patient. In well-to-do cases, I advise a sojourn in the country or by the sea-shore.

At the end of from six to ten months, I do not prescribe the mercurial frictions for a longer period than ten days, and I then advise my patient an interval of repose varying from three to six weeks or even two months, according to the case. This method of treatment is followed to the end of the first and during the second year of the disease.

I am in the habit of administering sudorifics, purgatives and out-door exercise, in order to make the mercury, as it were, circulate through the economy and thus avoid cumulative effects. In exceptional cases, where the patient suffers from persisting headaches or pains in the bones (osteocoes), and where the symptoms do not yield to mercurial medication, I prescribe for the time being, from two to three grammes (30 to 45 grains) of iodide of potassium in combination with from fifty decigrammes to one gramme (7½ to 15 grains) of bromide of potassium.

From the end of the second year my treatment varies greatly, according to the case. If after a certain time the individual is free from syphilitic troubles, I observe the custom of ordering every three months, and during a period of ten days, rubbings of mercurial ointment two to three grammes (30 to 45 grains), and for a few weeks after the inunctions, I administer two to three grammes of potassium iodide, generally after the principal meal, or at night in a glass of milk.

I need not say that when syphilitic phenomena have manifested themselves, I have resorted to a treatment sufficiently adequate to combat the severity and duration of the accidents observed. If at the beginning of the third or fourth year, my patient remains free from all syphilitic manifestations for more than a year, I am in the habit, by way of precaution, of prescribing twice a year, that is, in the spring and fall, mercurial rubbings for a period of ten days. One month after this operation, I order my patient to take, for a space of three weeks, iodide of potassium in thirty grain (two gramme) doses.

If he comes to me after the fourth year, having apparently, for a long time, escaped from syphilitic phenomena, I recommend, by way of precaution, a continuance of the same method of treatment; but if there is the least suspicion of any syphilitic phenomena, I advise him to consult a specialist.

In a general way I try to avoid, as far as possible, the pushing of the treatment by mercury and potassium iodide, the effects of which I have reason to fear. I have many times seen alterations of the economy following the abuse of these therapeutic agents, and, as a consequence, serious neurasthenic phenomena.

I have, likewise, often observed that these neurasthenic symptoms, with or without the presence of dilatation of the stomach, have been mistaken for phenomena of cerebral or cerebro-spinal syphilis. I have also noticed that the continuance of this mercurial and iodated treatment, which has been the very cause of these nervous troubles, has gradually increased the severity of these. Serious consideration of the subject, at such moments, has led me to make the following observations: An individual contracts syphilis. He consults a syphilographer and is by this well treated. Vexation, excesses, bad hygiene, the abuse of mercurial and iodated preparations, all contribute to produce in the patient the neurasthenic symptoms referred to, chief among which are headache, vertigo, change in the individual's character, and disordered memory. Under such circumstances the

physician is liable to diagnose the case as one of cerebral syphilis. Once made, this diagnosis is followed by a simple and natural consequence. The specific treatment has been insufficient, and, therefore, it is further pushed. In spite, however, of this measure, the nervous phenomena do not diminish; on the contrary, they are increased. The patient again consults his physician and this, in turn, increases the doses of the remedies. Thus, the undue persistance of the specific medication renders worse the neurasthenic condition, a condition which has been produced, in many cases, by the abuse of such a treatment, an error of diagnosis, and by the non-observance of the common rules of hygiene.

I have at length treated of the danger resulting from the abuse of the specific treatment, and of the diagnosis of neurasthenia which is frequently mistaken for cerebral syphilis, chiefly because I am now authorized to say that I myself have, at some time, labored under the same errors.

I have afterwards made up for my faults in many instances where I have entirely subdued neurasthenic phenomena by the simple suppression of a specific treatment instituted for a pretended cerebral syphilis.

Such are the principles which have guided me.

I will conclude by saying that I do not prescribe the internal administration of mercury when I can use this remedy otherwise, as that method, as has been shown by Jullien, is more apt to produce digestive, and hence, neurasthenic, disorders, than the external application of the remedy.

I employ the drug internally in those cases where, owing to various causes, the rubbings are repulsive; in those, where it is advisable to keep secret the ingestion of the drug, as, for example, married women; in those that owing to an irritable skin, can not tolerate the local applications (generally this inconvenience can be avoided by employing mercurial ointment newly prepared with fresh benzoated lard, cleansing the part twelve hours after the application, afterwards washing and powdering it); in those where it is absolutely necessary to conceal the treatment, and finally in those cases that, like commercial travellers for example, will not submit themselves to the local use of the drug.

In regard to the hypodermatic injections of the soluble or insoluble salts, I only employ them in hospital practice, especially in the case of public women, since these, as a general rule, do not take the medicament in other forms prescribed.—Prof. H. Leloir, in *Journal de Médecine de Paris.*

ZINC PASTE AS A DRESSING.

Drs. Cordua and Glum have experimented with Unna's modified zinc pastes as a surgical dressing (the thicker paste consists of zinc oxide 10 parts, gelatine, glycerine and water each 30 parts, and the thinner one, of zinc oxide 10 parts, gelatine 20 parts, glycerine 30 parts, and water 40 parts). They found this application especially useful in the treatment of granulating cavities and wounds. After the skin has been disinfected with a 1 to 2,000 sublimate solution and dried, the paste, which has been warmed over a water-bath, is applied in a broad streak around the wound at a distance of 1 to 2 centimeters from the margins, with a thick brush, and then a thick layer of iodoform gauze is pressed with moderate firmness upon the wound surface and the surrounding area covered by the paste. According to the situation of the wound, the layer of gauze and surrounding skin may be brushed with the thin zinc paste, and thus made to adhere firmly, or the dressing may be secured by one or two turns of a bandage, and the paste applied over both. Immediately after, and before the paste has become dry, its surface is lightly covered with cotton, which will thus prevent adherence of the clothing. In this way a perfectly fixed dressing is obtained, which has proved especially useful on the neck, chest, shoulders, hips, the upper third of the arm and thigh, where dressings are usually retained with difficulty. In cases of ulcers of the leg, after disinfection, the sore is covered with iodoform gauze, and the leg enveloped firmly in a mull bandage, over which is applied a layer of paste and then another bandage. This dressing may be left in place for eight or more days. If applied to hairy parts of the body the hairs must be shaved off for a wide distance around the wound.—*Wiener Medizin Presse*, 1 and 2, 1891.

ACETANILID FOR CHANCRE AND CHANCROID.

The *Journal de Médecine*, January 25, 1891, states that Basilevitch reports in *Nouveaux Remedes*, November, 1890, that cicatrization took place in a short time as a result of sprinkling acetanilid on the surface of the ulcers in one case of chancre in a woman and in two cases of chancroid in men.

In these cases acetanilid has the advantage over iodoform of being inodorous, and that large doses do not give rise to toxic manifestations. It is also less expensive than iodoform—an important consideration, especially in dispensary practice.

GYNÆCOLOGY.

SUBCUTANEOUS INJECTIONS OF ETHER IN PUERPERAL ECLAMPSIA.

An interesting supplement to the treatment of puerperal eclampsia, is offered by Dr. Perron, and quoted in the *Wiener Medicinische Wachenschrift*, April 12, 1891. The case recorded was that of primipara, twenty years old, who was seized with eclamptic convulsions two hours after delivery. Chloral in liberal doses, blood-letting, and even inhalations of chloroform, had been tried without avail. The convulsions, which had begun at eight in the morning, continued with unabating severity to return every half hour until noon and then became almost unremitting. The patient lay convulsed with severe dyspnœa and deeply cyanosed, her breathing was labored and stertorous, and death was momentarily expected. Dr. Perrin then injected subcutaneously a syringeful of ether, and in a few minutes the respirations became more regular and less labored. Fifteen minutes later, another similar injection was made, and a third injection two hours later. After the second injection the convulsions ceased entirely, and the patient made a speedy recovery. It is to be noted that no albumen was found in the urine.

PORRO'S OPERATION: PUERPERAL HYSTERECTOMY.

Dr. Joseph Price, in the *Annals of Gynæology*, calls attention to the present success in supra-vaginal extra-peritoneal hysteroctomy for fibroids which has greatly confirmed our confidence in the Porro operation over the Cæsarean.

The present low mortality has induced many operators to do the Porra—a complete and perfect operation and a wise practice—as it saves the patient from the risk of a subsequent section, taking away from the Cæsarean section the most important factor in its dangers—the succulent uterus with its incision.

In his discussions on supra-vaginal hysterectomy, he has endeavored to show that an uncomplicated operation of this sort, with the extra-peritoneal treatment of the stump, is, under the improved technique, an operation of comparatively little danger. He had no deaths from this procedure in his last forty consecutive cases, including two Porros. The operation, in the hands of all trained men, accords with my experience.

The complications of hysterectomy, when no important viscus is involved and the adhesions are simple, are not to be feared. In the Cæsarean section the danger of hæmorrhage is ever present; in the Porro operation the uterus is strangulated at once, thus obviating this complication. The Porro operation clearly has the advantage in these essential points: first, in absence of danger of hæmorrhage from uterine incision; second, in the extra-peritoneal treatment of the cut uterus; third, in the greater rapidity of operation. The results in the Porro operation should surpass those of ordinary hysterectomy for the following reasons: first, there are very rarely adhesions unless electricity has been used; second, there is no implication of any important viscus, and, accordingly, less hæmorrhage; third, less shock. In the Cæsarean section the suturing of the uterus greatly prolongs the operation, making a time consideration that is one of the most important in abdominal surgery. The factors of uncertainty in the healing of the uterine incision put our established ideas of exact surgery at sea; it is impossible to put it at rest. The uterine tissue is not stable, but is undergoing metamorphoses and degeneration; in no other part of the body do we find such a condition, creating such dangers of leakage and consequent peritonitis. This is all done away with in the extra-peritoneal treatment of the succulent stump; here the use of the serre-nœud is the ideal treatment, as it can be contracted upon the shrinking stump and hæmorrhage absolutely controlled.

Considering the sociological side of the question: Have we a right to sterilize a woman? We have not, if she is simply a propagating organism. If we take a higher view, she has the right to the best she can attain to, physically as well as mentally and morally. We should not leave her in jeopardy from a future peril. Again, the children from this class of women—deformed, rachitic, illy developed—often die young, and are at best but illy fitted for the battles of life.

Nearly one-third of the inmates of the New York hospitals are well able to pay for medical attendance.—*Ex.*

OBSTETRICS.

APPARENT GROWTH OF THE PLACENTA AFTER LABOR.

Dr. W. P. Chunn related to the Gyn. and Obs. Soc. of Balt., an instance of a patient who was twenty-eight years old, and had been married five years. She had had no children at full term, but had had three miscarriages. The first and second miscarriages occurred at about the fourth month of gestation. The last miscarriage occurred about May 10th, 1890. She had missed one period, and believed herself to be about six weeks pregnant. On the 10th of May she began to have bearing down pains and hæmorrhage with the expulsion of blood clots, lasting some three or four days. Then the pains subsided, the hæmorrhage ceased and I regarded the uterus as empty. On the 12th of June, however, she was again seized with violent pains, and during the night was delivered of a placental mass larger than a man's fist, which I saw the next morning; the patient, as well as myself, was surprised. The fœtus was searched for but no sign of it found.

THE POLYURIA OF PREGNANCY.

Dr. Voituriez (*Arch. de Tocol.*, December, 1890) concludes, after a study of this subject, that, in the course of gestation, polyuria of a type entirely confined to pregnancy is sometimes observed. In such cases the urine is clear, slightly acid, and of normal composition, excepting that the proportion of water is greatly increased, so that the specific gravity is low. Sugar and albumen are alike absent, and no cystitis is present in cases of this affection. Polyuria of pregnancy is probably more common than is generally believed. The only way of authenticating a case is carefully to collect all the urine passed every twenty-four hours. The disorder is not usually detected until the middle of the pregnancy. It rapidly disappears after delivery. In nature it is exceedingly mild, and it appears to endanger neither the mother nor the child. Dr. Voituriez describes a case where a pregnant woman was compelled to make water over twenty-four times in twenty-four hours, passing over seven pints of urine daily. She suffered from slight thirst. Yet she was safely delivered of a living (first) child, which weighed nine pounds. Tarnier's forceps had to be used. Directly after delivery polyuria ceased and never recurred. The secretion of milk was normal. Bromides and belladonna had been administered, but proved useless.—*Albany Med. Ann.*

PÆDIATRICS.

SALICYLIC ACID FOR THE PREVENTION OF SCARLET FEVER.

Sticker reports the observations of G. de Rosa, who administered salicylic acid, in doses of one to five grains daily, to sixty-six children exposed to infection during an epidemic of scarlet fever. Twenty-seven cases of the disease existed in the building, when administration of the drug was commenced. Only three of the sixty-six contracted the disease, the failure in these being ascribed to a longer exposure to infection.—*Centralblatt für klin. Med.*

ANTIPYRETICS IN CHILDHOOD.

Demme (abstract in *Therapeutische Monatshefte*, Feb., 1891) believes that a moderate elevation of temperature of a few days' duration is best treated without any antipyretic drug. When, however, a temperature of 104° F. is reached and maintained, these drugs are of decided importance, as in typhoid fever, rheumatism and broncho-pneumonia. In diphtheria, the acute exanthems and croupous pneumonia, on the other hand, they are to be avoided.

Salicylate of soda he employs in rheumatism, in daily doses of 7½ to 45 grains for children of between 2 and 15 years; and salol in about the same doses. He recommends thallin sulphate in typhoid fever in doses of ½ to ¾ grains for children from 3 to 15 years; antipyrine in the first stage of broncho-pneumonia in several hourly doses of three to fifteen grains; in later stages of the same disease quinine in equal doses. Acetanilide is efficient in the high temperatures of pulmonary tuberculosis, one to three times daily, in doses of ¾ to 4½ grains. Phenacetin, he thinks, is best given in several full doses, such as 1½ to 7½ grains, according to age.—*Univ. Med. Mag.*

TREATMENT OF CONVULSIONS IN CHILDREN.

T. G. Davis recommends, if the patient is cyanotic, a few whiffs of amyl-nitrite, followed by inhalations of chloroform and hypodermic injection of tincture veratrum viride—one-half drop for each year up to six years.

HYGIENE.

A RETROSPECT OF THE SUCCESSIVE EPIDEMICS OF CHOLERA IN EUROPE AND AMERICA FROM 1830 TO 1890.

Dr. Willoughby, in a paper before the Epidem. Soc., after alluding to the doctrine of epidemic influences, telluric and atmospheric conditions, and other unknown agencies as at one baseless and needless, and to the opposite delusion, prevalent in the south of Europe, of its being infectious in the same sense as small-pox, asserted that all the independent and scientific students of the subject in Europe and America were now agreed that the vehicle of contagion was contained in the evacuations, that it was thus carried by fomites as soiled clothing, etc., while persons suffering from the disease, even in unrecognized and mild forms, infected the soil and water of places through which they passed. Insanitary conditions favored its development, but the most insanitary towns—as Rome, Seville, and others—had escaped, since they had been provided with pure water supplies. The incubation period he believed to be as a rule from one to two days, four being an ample limit for quarantine purposes. Its transportability and conveyance wholly and solely by human intercourse was proved not only by the progress of every epidemic having followed the great routes of trade and pilgrimages, but by the rapidity of this progress having corresponded to the facilities for travel, whether by caravans, river boats, railways, or ocean steamers, quoting in this connection Dr. de Renzy and others as to the altered circumstances of travel in Northern India; and he thus explained the immunity of Australia and Chili, virtually the most isolated communities in the civilized world. It was, he said, in 1821 that cholera, so far as was known, first advanced from India westward, reaching Astrakhan in 1823, but subsiding until 1827, when a fresh wave swept over Persia, entering Russia in 1829. In 1830–31 it was fomented by the war in Poland; in 1831–32 it spread over the whole of Europe; and in 1832–33 over North America, lingering in each continent for about two years longer. It was remarkable, and totally inconsistent with the theory of conveyance by winds, that, though some cases had occurred on board ships in the Medway as early as July, 1831, it did not reach London till February, 1832, having effected a landing at Sunderland and travelled *via* Newcastle, Edinburgh, Glasgow, Belfast, Dublin, and Cork, whence it was at length brought to London. A wave rolled over Persia, Arabia, and Syria between 1836 and 1839, but retired again. In 1840 it entered China, then passed westward through Central Asia, re-entering India from Afghanistan and through North Persia, reaching the Caspian and Black Seas in the summer of 1847. Following the military road then in course of construction from the Caucasus to Moscow and the river highway of the Volga, it was intensified and spread by the fair at Nijni Novgorod and the massing of the Russian, Austrian and insurgent Hungarian armies on the Danube, and in the course of 1848–49 had attacked every country in Europe except Denmark and Greece, which were saved by stringent quarantine. It extended to America in 1849, but died out in the course of the following year. The epidemic of 1854 was not strictly a separate invasion, but rather a resuscitation of the last, which had lingered in the south and east of Europe and the west of Asia until called into fresh activity by the Crimean war. Every country in Europe and America was again invaded. The incidents of the outbreaks in America threw great light on the conveyance of the disease by fomites. The epidemic of 1865-66, which was the first to come wholly by the Red Sea, spread rapidly over Europe and America; but had scarcely subsided when a fresh explosion occurred at the Hurdwar fair in India in 1867, whence it was carried to Persia and Russia, being reintensified *en route* by the pilgrimage at Great Mesched in 1868 and the fairs at Nijni Novgorod in 1869 and 1870.

At the close of the Franco-German war, every country in Europe was attacked except Great Britain, and America succeeded in averting its importation until 1873. By 1874 it had, however, disappeared everywhere on this side of India. In 1881-83 it prevailed in Arabia and Egypt; in 1884 it made its appearance in France, and soon raged throughout Italy and Spain. The influence of pure water supplies was brought into special prominence, not only in the case of single towns in Italy and Spain, but in the almost complete immunity enjoyed by Germany, which had previously suffered heavily in every epidemic. Cholera lingered in the south until the end of 1885, since which date it had been absent from the continent of Europe until the isolated outbreak in Spain in 1890. This, Dr. Willoughby was convinced, was not imported

from the East, but was a recrudescence of the epidemic of 1884-85, brought about by excavations in infected ground. Still cholera had, since 1888, been slowly but steadily advancing by the Persian Gulf and the extensions of that route. It had last year reached the shores of the Caspian and Black Seas, and had raged at Mecca, though Egypt had almost miraculously escaped, and it had persisted at Aleppo and the Syrian ports certainly as late as January of the present year. He had little doubt that, as its march had closely corresponded with that in 1845–47 we might expect history to repeat itself in an invasion of Southern and Eastern Europe during the coming summer, unless, as in 1823 and 1839, it should retire, after having thus approached the confines of Europe. If, however, it had not already really died out, the vast increase of communication between the two continents rendered such recession less probable than it was fifty years ago. The paper was illustrated by a number of maps showing the great routes and the course of each epidemic in Asia, Europe and America. Sir W. Moore gave his experience of an outbreak at Aden following the unloading of a cargo which was proved to have been soiled with cholera excreta at Bombay, the crew remaining healthy; and Mr. Murphy alluded to Dr. Simpson's having traced the occurrence of cholera on board certain ships moored in the Hooghly to an infected milk supply. Surgeon Dawson argued in favor of epidemic influences, but Dr. Willoughby, in reply, urged that in the case of the ships at sea quoted by Mr. Lawson, the crews who must have been most exposed to atmospheric influences escaped, the steerage passengers only being attacked; while such negative evidence as that of the Southampton and Theydon Bois outbreaks in 1865 was worth nothing. It was more probable that some one suffering from mild and unrecognized cholera had crossed over from France, and, leaving the infection behind, had perhaps returned, than that Mr. Groombridge had inhaled it with the sea breezes on Weymouth pier. Such difficulties were incident to all cases even of smallpox, the source of which no one doubted. The President complimented Dr. Willoughby on having brought within the compass of a single paper a mass of information hitherto inacessible, and on having by his demonstration of the almost "postal regularity" with which the late epidemic followed the routes of travel by road, rail and steamships, regardless of prevailing winds, but refusing to cross the Scandinavian and Carpathian mountain ranges in mid-winter, given the *coup de grace* to the doctrine of atmospheric waves, which, in the case of this disease, he had until that evening accepted.—*Lancet.*

MEDICAL CHEMSTRY.

HÆMATOPORPHYRIN IN THE URINE.

A number of cases have recently been recorded in which the iron-free derivative of hæmoglobin, called hæmatoporphyrin, has been described in the urine. The first recorded observations of this occurrence were made by MacMunn in June last, and the most recent, by Salkowski, are published in the *Centralb. f. d. med. Wiss.*, 1891, No. 8, p. 129. The three cases mentioned by Salkowski were in women, and one case ended fatally. The cause of the occurrence of this abnormal substance in the urine is supposed by Salkowski to be the administration of sulphonal. This is, however, an abnormal action of the drug, and therefore appear to be due to individual idiosyncrasy.

TESTING FOR IRON IN ORGANS.

Zaleski (Die Vereinfachung von makro- und mikrochem. Eisenreaction, *Zeitsch. f. phys. Chemie*, xiv., p. 274, 1890) gives a simple method for detecting histologically the presence of iron in organs. Small pieces of the organ are hardened first in 65 per cent. alcohol, and then in 60 per cent. alcohol, to which a few drops of yellow ammonium sulphide are added. In twenty-four hours, if iron be present, the tissue has a greenish appearance, and on making a section the exact distribution of the particles of iron sulphide is readily detected by the color reaction.

NEWS AND MISCELLANY.

Experiments recently made in France with a view to discovering the amount of vitality in specimens of trichinæ show that, though they be subjected to a temperature of 25° below zero for two hours, they again become as lively as ever on a return of a normal amount of light and heat.

The University of Bonn is stated by the correspondents of the London papers to have ordered that the use of the Koch injection shall be discontinued in all the clinical hospitals under its jurisdiction.

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Clinical Lecture.

CONVULSIONS DEPENDING ON RICKETS—VARICELLA—SPECIMEN FROM A CASE OF CEREBRO-SPINAL MENINGITIS.

BY L. EMMET HOLT, M. D.,

PROFESSOR OF DISEASES OF CHILDREN AT THE N. Y. POLYCLINIC, ETC.

CONVULSIONS DEPENDING ON RICKETS.

Gentlemen:—Our first patient this morning is a little boy, six months old, who, his mother states, was perfectly well until about two months ago. Without any premonitory symptoms he was then taken with general convulsions, which were repeated during the following twenty-four hours, the child passing, at short intervals, from one convulsion into another. After this attack, he was apparently well, until about two weeks later when the same symptoms were repeated, the second series of convulsions being more severe than the first ones had been.

Ten days before he came here he had a third series of convulsions, similar to those which had preceded. The intervals between these different attacks were, however, free from symptoms of any kind, and since the last attack he has been apparently well.

At first sight, this boy seems to be well nourished and healthy; he is plump and weighs about 20 pounds, is not anæmic, holds his head up, has no evidence of paralysis, no fever, he is bright and apparently notices everything. What causes of convulsions are we to consider in such a case as this? Organic disease of the brain is apparently excluded, first, because his symptoms were not noticed until some months after birth, and second, because the labor was a natural one, no forceps were used, there is no rigidity of the neck, no spasms of the extremities and intellectually the child seems to be very well developed. The probabilities are that in a case like this the convulsions are of reflex origin, and the first thing to suspect as the source of such irritation in a child is the gastro-intestinal canal. The mother states, when questioned about this, that she now is nursing her child exclusively, but that about the time of the first attack of convulsions, she gave him coffee, soup, toast, and some other varieties of solid food. At the present time, however, these have been discontinued altogether. Could the same cause have been operative in both instances, or are we to look further for the cause of these convulsions?

In many cases of convulsions in infancy no cause can be found clinically, and the convulsive habit becomes finally established, the attacks recurring at shorter and shorter intervals, until the patient passes into a stage of confirmed epilepsy. Is this case to be looked upon in such a light?

Constipation is another cause of convulsions in children, but the mother states that this child's bowels have been always regular.

There is one strongly pre-disposing cause to convulsions in infants, and one that must never be overlooked by the physician, and that cause is rickets. The nervous system of young children is exceedingly prone to convulsive attacks, and in rachitic children this proneness is very much exaggerated. Never permit a young child, after recurring attacks of convulsions, to pass through your hands without first of all making a careful and exhaustive examination for the earlier signs of rickets.

What signs are we to look for in a child of this age? First, examine the head. What do we find here? The head of this child is of normal size, but the anterior fontanelle measures two inches and a half in one diameter by one inch and a half in the other. The sutures have not united, and over the posterior part of the parietal bone I can feel several soft spots in the cranium about the size of a nickel. These are spots of cranial tabies, and are, of themselves, almost conclusive proof of rickets. Their position on this part of the head shows that they have

been produced by pressure, the osseous elements of the skull being here absorbed and the membranous portions alone remaining intact. The bony deformities, such as beaded ribs, enlarged epiphyses, pigeon-breast, bow-legs, etc., belong to a later period of this disease, and are not to be expected here.

One other point in the history should be inquired into, namely, as to the presence of head-sweats. The mother states, upon inquiry, that for several months past, while the child has been asleep, she has noticed a profuse perspiration of the head and neck, sufficient to wet the pillow considerably. There seems, then, to be very little doubt that this child who, upon first sight, seemed so fat and healthy, is the subject of rickets. Rickety children are often fat, but their tissues are usually flabby. This child's tissues are not especially so, nor is he anæmic. There is to my mind no doubt that the underlying and predisposing cause for the convulsive seizures is rickets. In such children we find that a very slight exciting cause is sufficient to bring on attacks of convulsions, second attacks always move easier than the first ones, and subsequent attacks from still more trivial causes. The exciting cause of the first attack, I judge in this case, was the improper food the mother gave the child, but what the particular thing has been that has excited the subsequent attacks, from the absence of details in the history of the case, I am unable to say.

The treatment of convulsions in children involves two distinct points: First, the treatment of the seizures, and second, the treatment of the child's general condition in the intervals, in order to prevent subsequent attacks. During the seizures, no single remedy has been in my hands so successful as the use of chloral by the rectum. To a child of this age, that is six months old, it is safe to give six grains as an initial dose, and repeat this in half an hour, and again at the end of an hour unless the attacks are controlled in the meantime. It is to be given preferably in warm milk, and we can generally count upon producing an effect in fifteen or twenty minutes after the administration of the first dose. It is often necessary to give chloroform for the first few minutes, while waiting for the effect of the chloral. Another valuable remedy in the convulsions of children, is morphia given hypodermically. There is a strong prejudice in the minds of the profession against the use of morphia in the case of young children, but its injurious effects have been owing to the overdose that has been administered rather than to the use of the drug itself. It is certainly a drug that we can ill afford to do without in this connection. One-eightieth of a grain can be safely given to a child as old as this one, and the dose repeated in half an hour if no beneficial effects are produced. It is always best in giving morphine to children, to give small doses repeatedly, rather than a single large one at once. Ice, or iced cloths should also be applied to the head, and the child kept as quiet as possible during the attack. I will say, in this connection, that I have seen very little good result secured by the commonly employed treatment of mustard baths. Harm is often done by the unnecessary disturbances of the child. If constipation has preceded the attack, or there is a history of the child having eaten any indigestible food, the colon should be irrigated in the first instance, and in the second instance, the stomach should be washed out, whatever other methods you employ, for these procedures generally allay the attack. In the interval, in ordinary cases, it is sufficient to keep the child under the influence of the bromides for several weeks, or longer, if the attacks have occurred several times. In the case of this child, you will have to do something more. In order to control this tendency to convulsive seizures, we must give prompt and immediate attention to the rickets. To this end, we will give cod liver oil and $\frac{1}{200}$ of a grain of phosphorus, three times a day, dissolved in the oil. These remedies are to be kept up for several months, the child to be taken as much as possible into the open air, and regular habits of nursing and sleep enforced.

VARICELLA.

The second patient now I present to you for diagnosis. He is five years old, and is generally well developed. We will first make an examination of his skin and afterwards get a history of his disease from the mother.

In making an examination of a cutaneous disease in a child, it is always well to strip him completely and examine his entire body. An eruption may present very peculiar features upon one part of the body so as to render a diagnosis very doubtful; while in another part it may be perfectly typical. In adults it is not always possible for the physician to do this, but there is that advantage in pædiatrics that the physician has at least, the privilege of examining the entire body of the patient.

As the child's body is now completely exposed to view, you notice it is covered with

a sparsely scattered eruption. It is discrete everywhere, a little more abundant over the shoulders and trunk than over the extremities, and rather less upon the face, than upon the body. In some parts we see vesicles, in others, papules, and in others still, you will notice that vesicles have dried and form small crusts with a slightly depressed centre. In other parts, there are found simply macules. All these varieties are found in pretty close proximity to one another. There has been considerable itching of the skin, as is evident by the amount of irritation we see about some of the older spots. Nowhere do you see any of the patches coalescing.

In calling upon the members of the class to make a diagnosis of this condition, Dr. A. says scabies; Dr. B. papular eczema; Dr. C. erythema and Dr. D. varicella. The last diagnosis is certainly the most probable one. There is one point by which we can make a differential diagnosis of varicella from any of the skin affections suggested by the gentlemen of the class, and that is by an examination of the mouth of the patient. I find on looking into this child's mouth, a typical vesicle on the hard palate, and another one upon the inside of the cheek. Under these circumstances this point is enough to settle the question of diagnosis. The appearance or non-appearance of the spots in the hair is not of any special diagnostic value. One other point by which we may differentiate varicella from many other forms of eruptive fever is the great diversity of lesions seen at the same time on the patient. This is due to the fact that the eruption comes out in successive crops every two or three days. So we may have all the different stages of the disease represented in a given part of the body.

Ordinarily, varicella is so mild a disease that it scarcely needs any treatment. A diagnosis, however, is always desirable; and in this case one fact in the history is sufficient to diagnosticate it from papular eczema or scabies, viz.: that it made its appearance within the last three days. It should be remembered that varicella may be serious and even fatal. When such is the case, it is most frequently in institutions where many children are congregated, and then usually a fatal result is brought about by complications. I have on two different occasions seen a fatal result follow an attack of varicella from a complicating erysipelas developing about the pustules. Occasionally a localized gangrene is seen, forming a distinct variety of this disease known by the name of varicella gangrenosa. Nephritis has also been observed as a complication of this disease and in a few instances, bronchopneumonia. So that in institutions practically all cases of varicella should be isolated with promptitude, as the disease is of quite a contagious character, and during the period of desquamation, warm baths should be given daily to the patient, and this should be followed by inunction with carbolized vaseline, or a one per cent. ointment of ichthyol. Continued disinfection of the skin during the period of desquamation is always advisable.

SPECIMEN FROM A CASE OF CEREBRO-SPINAL MENINGITIS.

I will now pass around the class for inspection a specimen of a brain removed from a child who died two days ago of cerebro-spinal meningitis. The child was perfectly well until four days before his death when he was suddenly taken ill with a temperature which ranged from 104° F. to 105½° F., throughout the day. He vomited twice in the morning and had one large, normal stool. A physical examination failed to reveal any evidence of disease either in his throat or lungs. On the following day the temperature range was between 103° F. and 105° F., and pulse from 150-160, respiration regular, and the child showed some signs of restlessness. There was no more vomiting. During the night the patient was quite restless and on the morning of the following day he developed marked signs of nervous irritability. He bit his fingers and rolled about restlessly in his crib. Muscular twitchings developed at the extremities during the afternoon, and there were noticeable signs of general hyperæsthesia. The pupils were dilated and responded imperfectly to light, but there was no rigidity or any evidence of paralysis. The child looked pale, occasionally uttered low screams and prostration gradually began to increase.

On the evening of the following day some rigidity of the muscles of the neck were for the first time noticed, with slight rigidity of the extremities. The abdomen was rounded but soft and natural. The pulse rose to 200, was very feeble, and almost imperceptible at the wrist. During the night he passed from a half-drowsy state into a condition of semicoma. On the morning of the next day he was comatose with the right hand remaining quiet and the left hand constantly moving. Twitchings of the right hand and

face were noticeable at this time and death took place at 11 A. M. that day, the temperature being $105\frac{6}{10}°$ a few hours before that event.

No cause could be assigned for this illness save that the child had had a discharge from both ears, which, however, had ceased six weeks previous to his death. On further inquiry it was found out that the child had sustained a fall 2½ weeks previous to his fatal illness, but this was followed by no important symptom at the time. It is doubtful if either of these factors, the fall or the otorrhœa, played any part in bringing about the death of this child.

The autopsy showed all the organs essentially normal, except the brain and spinal cord. The anterior half of the brain, you will see, is covered with a thick layer of lymph and pus, giving to it a yellowish-green hue, and concealing the normal brain substance. This is found in greatest abundance over the convexity. At the base of the brain it follows the line of the Sylvian fissures, and in the posterior half, this exudate is seen in patches, but nowhere does it cover a continuous surface. It is generally found distributed along the course of the blood vessels. There are no tubercles present, and the ventricles are not distended. There is no softening of the cerebral substance.

The cord is normal, except at its lower portion, where a small collection of pus was found. There is no lymph coating the membranes of the cord.

The diagnosis of this case was exceedingly obscure until the night before the death of the child. Up to that time he presented simply the symptoms of an acute febrile illness, with very high temperature and marked prostration. Please note in the history the absence of the common and classical symptoms of meningitis, viz.: persisting vomiting, constipation, retraction of the abdomen, photophobia and early opisthotinos. It is extremely difficult in these abrupt cases of meningitis to make a diagnosis. They much more resemble cases of acute pneumonia than those of meningitis. It is only by careful and repeated examination of the lungs in this case that pneumonia was excluded.

A great deal of light has been thrown on the etiology of the cerebro-spinal meningitis within the past few years. Many of these cases of meningitis are found to depend upon the pneumo-coccus of Fraenkel. This germ has been found more frequently than any other in this particular disease. In a case of my own, recently studied bacteriologically by Dr. M. Prudden, of this city, cultures of pneumo-coccus were found in the exudate. This case is the more interesting from the fact that the symptoms were largely pulmonary.

NEURALGIA SECONDARY TO LA GRIPPE—CHRONIC BRONCHITIS—PLEURISY WITH EFFUSION.

BY JOSEPH M. PATTON, M. D.,
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Gentlemen:—This lady came to the clinic about a week ago complaining of neuralgia of about two weeks' duration. Now, we know that the ordinary person terms everything that is painful neuralgia, but when she describes the pain by running the finger down the line of the sternomastoid, down the anterior border of the trapezius, over the deltoid and over the extensor muscles of the forearm, of course we begin to doubt its being neuralgia. Neuralgia is an acute pain which is located along the course of one of the nerves. If it is neuralgia you can determine the exact nerve to which the trouble belongs. For instance, if an individual has neuralgia of one of the branches of the 5th nerve, it will be located over the portion supplied by that nerve. If it is the first branch you will have pain over the temple and around the ear, over the top of the head; if it is of the second branch of the trigeminus you will have pain over the malar bone, down along the affected side of the nose, and perhaps extending down to the jaw. If it is the third branch you will have pain in the jaw radiating down under the chin. If there be neuralgia of the cervical nerves you will have pain radiating from the back of the neck around towards the front or down towards the shoulder; and if it is the intercostal nerves, or the nerves of the arm, you will have pain following the course supplied by these nerves. If the neuralgia is due to an affection of the nerve, an inflammatory condition of the nerve, you will generally be able to locate some sore spot. In neuralgia of the second branch of the 5th, if it is due to an inflammatory condition of the nerve, you will find a sore spot in front of the ear or immediately below the eye or just below the center of the malar prominence. If you touch these branches of nerves you will have severe pain; there will be some tender spot; you may have just as severe pain in one of these nerves without any sore spot whatever. When you place your finger in

the region of the affected spot there is soreness, which extends along the muscles of the neck and shoulder. She complains of severe pain when we put the cervical muscles on the stretch. It has the appearance of a rheumatic affection of the muscles rather than of neuralgia. She tells us that some two or three weeks ago she had an attack of the grip, and after recovering in a measure from that she became afflicted with this pain. Now, neuralgias and rheumatic pains in the muscles and tendons are often secondary consequences of the grip. I have seen two or three most severe neuralgias secondary to attacks of the grip this winter. They are not what you might call true neuralgias, that is, they are not due to an inflammatory condition of the nerves; they are apparently rheumatic in character, and are relieved by rheumatic remedies. One case was under my care two or three weeks ago, following a moderately severe attack of the grip. It was a case of neuralgia of the second branch of the 5th nerve, with no tender spots especially. The face was sore over the nervous foramina and was entirely unrelieved by any of the neuralgic remedies.

All those remedies which are said to be efficacious in neuralgias of the 5th nerve, such as gelsemium, aconite, aconitine, cimicifuga, the ordinary neuralgic pills—all of those remedies from which you would expect effect in neuralgias of the 5th nerve, were entirely ineffectual. You will find that the pain is relieved temporarily, but not sufficiently so to do any good. The pain in this case was relieved by salicylate of soda administered in large doses, twenty grains every two hours. The pain disappeared promptly, and under its continued use for two or three days, failed to return. There were no unpleasant effects from its use. Ordinarily, such large doses of salicylate of soda will cause unpleasant effects in most patients, such as dizziness, tinnitus aurium, headache.

Now, the point to bear in mind in these neuralgic and rheumatic pains that result from the grip, is that they are not, as a rule, true neuralgias, they do not result from inflammatory conditions of the nerve, but are systemic conditions, and are best relieved by some anti-rheumatic remedies. This woman has been taking bromide of quinine and phenacetine, two grains of quinine with five or six grains of phenacetine, every two or three hours. While that relieves the pain while she takes it, the soreness of the muscles is much better, but still persists.

In using these synthetical remedies for pains, as a rule, if you do not get response to the administration of them within a few hours it is best not to expect any result from them; if they do not promptly relieve the symptoms they fail, and if they afford relief at all it is within a few hours. As this soreness still persists, I think this patient will do better on salicylates than anti-rheumatic remedies. I would prescribe for her to-day, ten grains of the salicylate of soda, every two or three hours, according to the way in which her stomach will bear it. In some people it is an irritating medicine to administer as far as the stomach is concerned, and you have to be careful, especially in women, and give it largely diluted in water. I expect that will relieve her trouble better than anything else.

This lady is another victim of the current affliction. She had the grip about two or three weeks ago—a slight attack of it, and since that time has been complaining of weakness. She feels almost too weak to go about—no ambition. She also has some pain in her limbs and arms and in the back of her neck. You will notice in regard to the pains that are complained of in these attacks of the grip, barring the headache, that they are, as a rule, confined to the tendons of the cervical region and the lumbar region, with some pains in the limbs. These pains are sometimes very severe in the cervical region, and also in the lumbar region, with no special stiffness of the muscles. Her trouble now is probably the weakness that is complained of. It is somewhat surprising the amount of physical weakness which will follow a comparatively slight attack of the grip. This year the name influenza would hardly seem to apply to the disease, as there are very few cases that have exhibited any marked trouble with the mucous membranes; it is not the characteristic coryza or sneezing, or the suffused condition of the eyes or pharynx that is complained of, nor the mucous membrane of the larynx, and there is not so much bronchial inflammation in the start, though that may follow as a secondary matter. This year the symptoms of influenza are entirely wanting, and the trouble consists generally in high temperature, great weakness and pain. The weakness which follows these attacks is not at all consistent with the amount of temperature or with the length of the attack. I have seen several cases where the temperature did not go above 101°, and where there was very little pain, and yet the secondary exhaustion following the attack would last from one to three weeks. Again, you see cases with a temperature of 103° or 104° with-

not very much pain, which seem to be well in a few days after the temperature goes down, so that the exhaustive effects depend upon the condition of the system of the patient, and not on the height of temperature or severity of attack.

The administration of remedies for the acute stage of this trouble may have something to do with the exhaustion which follows. It is fashionable to give antipyrine, acetanilid, phenacetine, antiferbrin with, or without quinine, both because that is the fashion of the day, and because they are very efficient remedies for reducing fever and pain, at the same time they leave a depressing effect. Any of you who have administered antipyrine in marked doses in typhoid fever or pneumonia, or any of the acute exhaustive diseases, will have noticed that you get a more depressing effect from its prolonged use, than in those cases in which these drugs are not used. These patients will take quinine for three or four days, and if they do not get much better they will go to a physician, and he gives them as much antipyrine or acetanilid as they will stand, and by the time they are beginning to get well they complain of great exhaustion due, perhaps in part, to the administration of these remedies; at any rate, there seems to be a great deal more exhaustion following the grip this year than I ever noticed before.

Another marked feature of the disease this year, is the tendency to bowel trouble—catarrhal inflammation of the bowels. As a rule there is not much difficulty with the stomach; the trouble seems to be with the intestines. The diarrhœa will begin with the active symptom of the disease, or will follow as the patient begins to get better; it is accompanied by considerable fermentation, a good deal of flatulence. The passages are frequent, thin, slightly greenish as a rule, showing evidences of imperfect digestion. That has been the case also with pneumonia. I have hardly seen a case of pneumonia this winter that has not been accompanied by diarrhœa—even the asthenic cases of pneumonia all have it, and in the other cases which occurred in people who were weak and feeble, they were also afflicted with it. For instance, a woman was under my care a short time ago who had had chronic bronchitis for years; she was very much run down in health; she had a croupous pneumonia of one lung, which got along fairly well, but the attack in her case was accompanied by diarrhœa during the course of the trouble. Another case, a strong, active young man of 20, with double pneumonia, respiration 45, and pulse 140, temperature 104°, a very severe one, also developed diarrhœa about the time that the temperature began to drop. And so it ran through all the cases. I lost a case of pneumonia this morning in a young man of 27, where the trouble began as a gastritis, which I succeeded in relieving, when pleuro-pneumonia developed with an active diarrhœa all the time. This diarrhœa is not dependent upon what you feed the patient. I have kept them on an exclusive milk diet. I have fed them on beef peptonoids and beef extracts, and on broths; I tried every manner of diet, and it makes no difference. It seems to me some atmospheric condition.

As regards treating the exhaustion which follows attacks of the grip, of course much depends on the patient, the character of the attack, and the amount of food which they are able to take. They should be put on tonic treatment, and among the best things to feed these patients with are some of the tonic wines. Coca wine or Tokio wine, which is a good deal used just now, is very beneficial. The coca wine of Mariana & Co. is a nice preparation—one which I have used a good deal in these cases, one glassful two or three times a day. They respond to it nicely. It has a tonic action on the mucous membrane of the throat and larynx where there is troublesome cough, or hoarseness of the voice. They should be fed on light diet, that is a diet from which the starches, sugars and fats are excluded, so that you will not have much transformation of sugar into glycogen, and therefore there is not much chance for fermentation. For the tendency to fermentation and diarrhœa the best remedies are those which prevent intestinal fermentation, intestinal antiseptics. The old remedies, bismuth, or dilute mineral acids are good. It is more fashionable now to use salol, napthol, napthaline, thymic acid, or some such preparations. Salol is a nice remedy, and should be given in 5-grain doses in the form of a sugar coated pill, one every three or four hours. You can use napthol and napthaline if you so desire Where there is fermentation in the stomach, one of the best remedies is a grain, or a grain and a half of thymic acid, with five grains of charcoal in a capsule; it relieves fermentation nicely.

This patient complains principally now of flatulence, and not so much of diarrhœa. She says her bowels are not loose at the present time, but that the flatulence is the only trouble that bothers her. I would put her

on one of these remedies—salol, for instance, with one of tonic wine, and expect her to regain strength quite rapidly.

CHRONIC BRONCHITIS.

This lady comes to us from the throat clinic. She complains of hoarseness. This hoarseness she has had for two or three years, mostly in winter. Professor Brown has referred her to us for examination of her chest in order to determine whether there is any condition there which would add to the permanency of this hoarseness. She says she has some cough nearly always in winter, and that it bothers her more in the evening than at any other time. That fact which she states of her own accord, that the cough is more troublesome at night than in the morning, would probably exclude the stomach as a cause of the cough or laryngeal irritation, for the reason that coughs which arise from the stomach, as a rule, are more troublesome in the morning than at any other time. If the reflex trouble of the stomach is the cause you will find the coughs are more troublesome; immediately after getting out of bed, they cough a long time until they raise a little mucus, then perhaps they will not cough but once or twice during the day to amount to anything. That is not only characteristic of stomach cough, but it is characteristic of trouble with the stomach in any chronic cough. Where you find the coughing spell is in the morning you may look at once for some trouble with the stomach. She says her cough is worse in cold, damp weather, sufficiently so to make her quite short of breath at times.

Expansion of the lungs is good; vocal fremitus is unchanged, and the percussion note is unchanged. The only thing I find wrong with her lungs is a slight harshness about the breathing over the upper portion of the lungs in front, produced by a little chronic inflammatory condition of the bronchial lining. Occasionally through her lungs during the first one or two deep inspirations you find solitary râles which disappear after deep inspirations, showing that there is a little adhesive mucus which is displaced by deep breathing. This may have something to do with her hoarseness, as the bronchial coughs which are worse in winter and during damp weather, which clear up during dry weather, are due to a little swelling of the mucous membrane with increased secretion of mucus, nd are very apt to cause congestion of the vocal cords or of the larynx from the constant coughing and hacking which they produce, and you frequently see these conditions of the larynx clear up after having cured the condition existing in the bronchial tubes.

Now, for the relief of that condition. You want something slightly expectorant with an alterative, especially in old women. One of the best combinations is five to ten grains of iodide of potash with two or three drops of tincture of belladonna, and about the twelfth of a grain of tartarized antimony. In children and young people, one of the best remedies is the syrup of hydriodic acid which contains a certain percentage of free iodine, and is a most excellent way to give iodine. It is very palatable. I have seen localized bronchitis, both in children and in adults, which would resist all kinds of cough mixtures and all kinds of tonics, clear up promptly after the administration of a little iodine in this way. It is especially valuable in those chronic coughs which follow whooping cough and measles in children, and it is an excellent remedy for these conditions. To this woman I should give five grains of iodide of potash, or you may give iodide of soda, either one, I prefer iodide of potash in this case, with a little tartarized antimony, and no belladonna on account of the tendency to an inflammatory condition of her throat, because if she got enough to affect the mucous membrane at all, it would make her throat and larynx dry. She would cough more and experience more difficulty with her throat, so that we will leave the belladonna out.

PLEURISY WITH EFFUSION.

This boy, aged 15, we aspirated last week. I brought him here to-day for you to see whether there is any change in his condition or not. He says he feels much better in every way. Although we removed three quarts of fluid from him at that time, there were fully three pints left. You remember that his heart was much displaced, almost to the right nipple and the lung very much compressed. As to the amount of fluid which you should remove in these cases, it depends a good deal on the nature of the effusion and on the case. Where the chest has filled rapidly, and where there is a great deal of effusion, especially in young subjects, I see no objection to removing at least three-fourths of what is there in the chest or more if you can do so without causing any dyspnœa. This boy, after he got off the table last week, as soon as he began to move around, began to cough which was quite severe, hacking, and irritating, and was forced to lie down and rest until his lung

had accommodated itself to the greater amount of room before he could move around. Where the patients begin to cough or complain of some constricting pain in the side while withdrawing the fluid it is about time to stop.

I want you to look at the difference in the spine. You remember how much lateral curvature there was of the spine last week. That is nearly straightened out now, and it was supposed to be due to the weight of the fluid in the left side, which caused it to gravitate in that direction. You notice a little prominence on the left side of the sternum, at the costo-cartilaginous junction, it has not disappeared, and that is probably due, as we had previously supposed, to some bending of the junction of the ribs and the cartilage from pressure, and was doubtless there from infancy,—one of the slight forms of what is called pigeon breast—which is due to some interference with the respiratory conditions which produce pressure on the ribs at the time when the cartilages are soft and bend very easily. You will find these conditions developing in children who are the subjects of enlarged tonsils for a long time and have difficulty in breathing; you will find them developing a prominence along the sternum due to pushing out of the ribs, from increased pressure in the lungs made by the efforts at respiration—efforts to get the air out of the lungs, caused by the small amount of room in the throat where the tonsils are quite large. You will find that if the tonsils are removed in the early stages of these slight deformities, they will generally disappear, or at least will not grow worse.

The next thing we notice is that there is absence of pulsation in the right mammary region, where it existed last week, and that pulsation has moved over to the left of the sternum, and has almost regained the natural area of cardiac pulsation. We can now feel the action of the heart in the natural area. You notice there is some motion of that side, it is not as good as it ought to be, but it is better than it was. The percussion note is vesicular in quality down as far as the 7th rib, from that point it is more or less flat. You can hear the respiratory murmur all over the left side down to the present line of flatness and behind below the angle of the scapula. You may occasionally, when he takes a deep inspiration, hear the rubbing of the pleural surfaces over each other at the end of each inspiration—a dry, grating sound. There is still a slight amount of fluid in the left cavity.

As to the likelihood of these cases filling up again, in a case like this, a young boy who has developed that amount of fluid within a comparatively short space of time, if the fluid is taken out inside of a week or so of its development, as a rule there is little danger of the pleura refilling; but if the condition be left alone for several weeks, and the patient is very much run down in strength, you are apt to have the pleura refill again. This is especially likely in old people. In patients who are 60, 70, or 75 years old you will find pleurisy develops quite rapidly, and even though it may be removed if there is marked compression of the lung, you will find that such cavities will fill up again, so that you are apt to tap them two or three times. But as a rule after two or three tappings they cease to refill, and you have no further trouble with them. It is probable that the small amount of fluid which remains at the end of a week in the left side of this boy will not compromise the lower portion of the lung or the pleural surface before it is absorbed, so that it is hardly worth while to attempt to withdraw it; the expansion of the lung has sufficiently increased and circulation is good enough to take it up without much difficulty. I expect at the end of two weeks to be able to get a dry friction sound clear to the bottom of the lung; this sound will disappear as the pleura becomes healed, and there will probably remain a slight thickening of the pleura which will probably do him little or no injury.

COMMUNICATIONS.

THE RELATION OF CONCUSSION OF THE BRAIN AND SPINAL CORD TO INFLAMMATORY AND OTHER MORBID CONDITIONS IN THESE ORGANS.

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It is certainly apparent to all members of the medical profession that brain and spinal surgery has received during the last quarter of this century an unusual and likewise unprecedented amount of attention. It is likewise equally apparent that great progress has been made by those who are devoted to this branch of surgery; it therefore becomes

highly necessary, that he, who is about to enter this field of medical literature, should first discover some dark spot or disputed question, on which he thinks he may possibly throw a few rays of scientific light. The traumatisms of the brain and its membranes have been more fully studied than those of the spinal cord. Undoubtedly this may be accounted for in part by the fact, that the first-mentioned organ is much more frequently the seat of these lesions than the latter.

I shall therefore direct the greater portion of my attention especially to any lesions following traumatic injuries of the spinal cord and its membranes.

It seems necessary to call attention to certain errors as a preliminary to the consideration of our first inquiry.

One of the most important of these has been expressed by Mr. Erichsen, in the following language: [1] "The consideration of the effects that may be produced on the spinal cord by *slight blows*, whether applied to the back or to a distant part of the body, is not altogether a matter of modern surgical study arising from the prevalence of railway accidents, but had, long antecedent to the introduction of modern means of locomotion, arrested the attention of observant practitioners." Since the above statement was made it has been clearly demonstrated to be erroneous by anatomical and experimental investigations. The anatomical studies have shown that the spinal cord is the best protected organ in the body, and experimentation has fully confirmed this position. The experiments which I made on dogs—the total number being 141—which were arranged and conducted for the especial purpose of producing concussive lesion in the spinal cord and its membranes fully convinced me that it required *a very severe blow*, which must even be delivered on certain limited areas of the body, in order to accomplish this object. I am likewise satisfied that this conclusion must neccessarily follow a careful study of my report entitled: "An Experimental Study of Lesions Arising from Severe Concussions."[2]

It should be further stated that the lesions produced in the spinal cord and its membranes are rarely apparent to the unaided eye, but were readily revealed under the microscope. This statement, however, does not apply to those cases in which there were either fractures or dislocations involving the vertebræ; since the lesions here were comparatively coarse.

The statement that a rupture of the spinal membrane has occurred, or that there has been a gross hæmorrhage into the substance of the spinal cord, or between the cord and its membranes, is certainly not entitled to credence unless coupled with the acknowledgment of either a fracture or dislocation of a vertebra. This statement is based on my examination of the lesions found in the spinal cord and its membranes, and I am so thoroughly convinced on this point, that I feel warranted in making this positive statement.

The so-called "railway spine" includes true concussion arising from blows, falls, gun-shot wounds, lightning strokes, electric shocks, etc., likewise contusions on the back, sudden flexions of the spinal column, sprains, wrenches and twists. Dr. John A. Lidell says, in discussing the consecutive effects of some of these injuries that: [1] "Among the remote effects of *sprains, wrenches and twists* of the spinal column, are chronic *inflammation of the vertebral joints* that are implicated, which is often suppurative in character, *destruction of the articular cartilages* and the *intervertebral substances* that are involved, and *caries* or *necrosis* of the adjoining vertebral bodies. In such cases, the destructive process begins more frequently at the junction of the vertebræ with the intervertebral substances than in the intervertebral substances or vertebræ themselves, because, as Mr. Hilton has pointed out, we know that in accidents, at least as far as we have been able to discover, "the most frequent lesion in injury to the spine is a partial severance of the vertebræ from the intervertebral substance."

A number of illustrative examples have already been presented, and inasmuch as this topic has already been pretty thoroughly discussed, no apparent need exists for presenting any additional instances of the same sort. I will, however, take space, to present a very instructive case, in which there simultaneously occurred lumbo-sacral abscess and suppurative spinal meningitis, in consequence of a blow on the spinal column:

The following abstract made from the report of the history of this case supplies the essential points: A healthy lad, of fifteen years, was struck by his playmate on the back with the fist. He thought little of it

[1] On Concussion of the Spine. A New and Revised Edition. London, Longmans, Green & Co., 1882.

[2] P. Blakiston, Son & Co., Philadelphia, 1890.

[1] International Encyclopædia of Surgery, Vol. IV, p. 870 et. seq. Edited by John Ashurst, Jr., M. D., Wm. Wood & Co., New York, 1884.

at the time, but was admitted to Guy's Hospital nine days afterwards; was treated with leeches and somewhat recovered, but the pain soon returned and fever ensued. "An abscess formed on the right side of the sacrum, which was opened, and continued to discharge, the flow of pus being increased by pressure on the abdomen. He continued to get worse daily, having much irritative fever and severe pain in the back. During the last week of his life he was exceedingly restless, and often delirious; and he complained of pain in all parts of his body, but particularly in the extremities. On one or two occasions he had loss of power over the bladder and rectum, but had no other symptoms of parapelgia, and could move freely in bed." He died twenty-two days after the casualty,

Autopsy:—An aperture in the integuments at the right side of the sacrum led into a very extensive abscess, external to the peritoneum, which occupied the forepart of the sacrum behind the rectum, and external to the ilia on both sides behind the psoas muscles. The bones were exposed but not diseased. Although the abscess had discharged externally on the right, it was most extensive on the left. It had burrowed up to the left side of the last lumbar vertebra and the sacrovertebral foramen into the spinal canal. When the theca was opened, it was found to contain a quantity of greenish pus, spread over its inner surface and over the cord itself. The spinal dura mater (theca) at the point indicated, was softened and destroyed, and the cauda equina was lying bathed in pus which filled the sacral canal. The membranes of the cord were inflamed throughout the whole extent, and there was purulent effusion as high as the dorsal region. The spinal dura mater was thickened, and its inner surface had lost its smoothness and transparency, and was of a dull green color. Pus could be squeezed out from beneath the visceral arachnoid in considerable quantity. The spinal cord itself was firm, and the microscope revealed no morbid condition in its substance. On opening the cranium, cases of acute arachnitis were found over the whole surface of the brain, greenish-colored lymph being effused into the sub-arachnoid tissue, especially at the base. The inner surface of the dura mater, around the foramen magnum and on the adjacent part of the occipital fossa, was of a greenish color, from lymph effused upon it. Bronchial tubes filled with tenacious mucus. Lumbar and bronchial glands slightly enlarged. All other organs entirely healthy.

The purulent infiltration of the spinal meninges which was observed in this case, occurring coincidently with the formation of a lumbo-sacral abscess, but without the production of paralysis, could scarcely have happened unless the sacrovertebral articulation had previously been opened, both externally and internally, but disease of the articulation itself in such a manner as to allow the products of inflammatory action to flow freely out of, as well as into, the spinal canal. Otherwise, the suppurative meningitis would pretty certainly have caused paralysis by compressing the spinal cord with its inflammatory products.

The clinical history of this lad's case, interpreted by the post-mortem appearances, appears to have been as follows: The blow on the back wrenched the sacro-vertebral articulation and caused a suppurative inflammation to be lighted up therein, particularly on the left side, and in consequence of this, purulent matter escaped in an outward direction, and led to the formation of an immense lumbo-sacral abscess; it likewise escaped in an inward direction, and caused the theca vertebralis to become softened and perforated, and extensively destroyed, and a diffuse suppurative inflammation which extended upward to the brain, to be kindled in the spinal arachnoid. It has been aptly said that "in all science, error precedes the truth, and it is better it should be first than last."[1] I have cited the case reported by Dr. Lidell, with all its details, in order that I might bring forward some of the results of my observations, made during my recent experiments, which afford a correct and rational explanation of the condition revealed by that post-mortem examination. There will be found in the report of my experiments, eleven cases, in which there was rupture of the ligaments of the sacro-lumbar articulation. There were marked pathological changes in the organs and tissues within the pelvic and abdominal cavities in six of these cases, which were immediately connected with the rupture of the ligaments of the sacro-lumbar articulation. Let me here present the following abstracts from post-mortem examinations for the purpose of giving a correct idea of the character of the lesions:[2] "Autopsy.—This examination re-

[1] Walpole.

[2] An Experimental Study of Lesions Arising from Severe Concussions, by B. A. Watson, A. M., M. D., p. 32, Exp. 4.

vealed, a rupture of the ligaments between the last lumbar and the first sacral vertebræ, deep and extensive ecchymoses over the entire post-sacral and right lumbar regions. A profuse extravasation of blood into the abdominal cavity, marked engorgement of the kidneys. Brain apparently normal, slight increase of the cerebro-spinal fluid in the cavities, and the cord was congested, to the middle of the dorsal region."

"Autopsy.[1]—This examination revealed the following lesions: Both kidneys congested; ecchymosis in the connective tissue covering the anterior surface of the last lumbar and the upper sacral vertebræ. The brain and spinal cord apparently hyperæmic. The removal of the integument over the sacral and lumbar regions showed an ecchymotic condition of the muscles. There had been a rupture of ligaments between the last lumbar and upper sacral vertebræ."

"Autopsy.[2]—This examination revealed the following lesions: Both kidneys congested; bladder distended with urine; extensive ecchymoses in the lumbar and pelvic regions involving psoas muscles; brain perfectly normal; the spinal cord was hyperæmic downward from the lumbar enlargement, including a portion of the cauda equina; rupture of the ligaments between the last lumbar and the first sacral vertebræ."

The essential point which Dr. Liddell has overlooked in his comments on the case which he has reported, are the pathological conditions of the organs and tissues within the pelvic and abdominal cavities. It was the *existence of these lesions which gave rise to the inflammation and suppuration* within these cavities. The post-mortem examination of Dr. Lidell's case sufficiently demonstrates this position. Dr. Lidell says:[3] "The blow on the back wrenched the sacro-vertebral articulation, and caused a suppurative inflammation to be started up there." The autopsy in the case fails to show that there is any erosion of the bones or cartilage within this articulation, and its history reveals the fact, that it was only immediately before death that there was the slightest indication of paraplegia. It is therefore certain that the wrench which he mentions consisted in producing a rupture of the ligaments of the sacro-lumbar articulation and likewise, as very frequently happens in those cases, some pathological lesions within the pelvic and abdominal cavities. The simple wrenching of any joint in a healthy subject—unattended with pathological lesions, has been amply shown to be a comparatively trivial injury, which does not lead to serious inflammatory complications or death.

The one hundred and forty-one experiments, which I made on animals, does not afford a *single example* which justifies the conclusion that injuries to the vertebral articulations are a whit more serious than those produced in the carpal and tarsal articulations; and, consequently, analogous reasonings may be here employed with entire propriety. We can not pass over the history of Dr. Lidell's case without pointing out a glaring absurdity, which may possibly have had its origin in carelessness. In this report, we are informed that a healthy boy, aged fifteen, "while playing with another lad, received a blow on the back with the fist," and in the absence of any additional statement bearing on this injury, we are left to infer that the pathological changes and even the death of the patient were directly caused by this blow.[1]

He who has examined the anatomical structure of the spinal column will readily perceive the absurdity of this statement. The blow inflicted was entirely inadequate to the production of the results which followed, unless there has been omitted from this report the most important factor in the history of this case. It is true that the force of the blow might cause the lad to fall—and if at this point, the history of the case showed that the boy fell across a bar, raised a few feet from the ground, in such a manner that his feet remained on one side, while his head was on the other, then the very important factor of leverage having been added, which would result under these circumstances in the production of a sudden flexion of the spinal column, would certainly bring within the limits of possibility the occurrence of the injuries which are reported in the autopsy.

It is scarcely necessary to mention the fact, that nearly all the injuries grouped together under the unfortunate cognomen of "railway spine"—so far as their remote effects are concerned—take their origin, either directly or indirectly in inflammatory processes. Consequently the consideration of the following queries assume importance:

1. Do inflammatory and other morbid changes take their origin in traumatic injuries of the spinal cord and its membranes

[1] Ib., p. 35, Exp. 10.

[2] Ib., p. 40, Exp. 24.

[3] Previously cited.

[1] Previously cited.

as frequently as the writings of Mr. Erichsen imply?

2. Do inflammatory and other morbid changes ever arise from traumatic injuries which are entirely uncomplicated by immediate symptoms?

3. How soon are the inflammatory and other morbid changes developed after the receipt of traumatic injuries in the cord, etc.?

In our consideration of the first question it is scarcely necessary to give a negative reply to those who have perused the writings of Mr. Erichsen on this subject; since they have already reached this conclusion. Furthermore, the mere assumption that serious results frequently arise from wholly unimportant injuries is not sustained by clinical observations or experimental investigations. However, Mr. Erichsen, in writing of those cases in which the patient has received no blow or injury upon the head or spine, but in which the whole system has received a severe shake or shock, in consequence of which an immediate lesion, probably of a molecular character, is sustained by the spinal chord and disease of an inflammatory character, or of a disorganizing nature is developed in it, the inflammatory action eventually creeping up to the membranes of the brain, says that the cases[1] "although necessarily more frequent in railway than in other injuries, do occasionally occur as a consequence of ordinary accidents." A perusal of Mr. Erichsen's writings has completely failed to convince me that he has supplied any basis for the support of the opinion advanced in the above statement.

In order, to demonstrate the correctness of this opinion which conflicts with all positive knowledge we possess on this subject—and which can not be supported by analogous reasoning—he should clearly establish the following facts, viz.:

(1) *That no disease of the brain or spinal chord existed at the time of the occurrence of the alleged accident.* (2) *That the consecutive inflammation did arise from the traumatism, and was not due, in part, or wholly, to a vitiated constitution.*

This evidence is entirely wanting; and, consequently we must maintain that Mr. Erichsen's statement should be excluded in cases of medico-legal evidence.

We have now devoted our attention to the consideration of the material points involved in our first query, but it would seem proper in this connection to give some additional thought to the consecutive results of concussive accidents.

Mr. Erichsen says[1]: "Whatever may be the nature of the primary change that is produced in the spinal cord by a concussion, the secondary effects are clearly of an inflammatory character, and identical with those dependent on chronic meningitis of the cord and sub-acute myelitis." The term concussion as employed in the above quotation evidently refers only to traumatism of the spinal cord and its membranes, but elsewhere the same author in speaking of sprains, twists and wrenches of the spinal column, says[2]: "It is important to bear in mind that the vertebral column is more apt to suffer in these strains of the spine than in the other forms of injury that we are discussing, and that in serious cases the full force of the mischief appears to be expanded in the spine itself independently of its contents which escape uninjured." The views expressed by Mr. Herbert Page on this subject are as follows[3]: "Happily, there is no doubt of the exceeding rarity of spinal meningitis, as an immediate result of localized injury to the vertebral column; and I know of no case in which meningeal inflammation has been caused by injury of some part of the body remote from the spine." The experimental study of concussion of the spinal cord has satisfied me on the following points: (1) True concussion of the spinal cord from blows, falls, lightning strokes, etc., is an exceedingly rare occurrence. (2) Secondary results, such as inflammation, suppuration, etc., very seldom follow the traumatism, owing to the fact, that the punctate hæmorrhages, etc., are generally widely diffused in various parts of the spinal cord, while the pathological lesions are so slight as not to supply inflammatoru foci. However, the danger arising from a true concussion of the spinal cord produced by gun-shot injuries, the lodgment of a musket or rifle ball in the spinal column is attended with much more danger from consecutive inflammation, etc., than those traumatisms which have been previously mentioned because of the following peculiarities: (1) The pathological lesions are more concentrated—resembling in this respect the ecchymoses arising from a concentrated contusion. (2) The lodgment of a ball in the spinal column is very liable to

[1] On Concussion of the Spine, Nervous Shock, etc., p. 95. New York. Wm. Wood & Co. 1875.

[1] Ib. p., 157.

[2] Ib. p., 128.

[3] Railway Injuries, p. 21. Philadelphia. P. Blakiston, Son & Co. 1891.

give rise to a septic inflammation, pus formation, diseased condition of bone, extention of the inflammatory products to the spinal membranes, and even the cord itself. It must be universally admitted, that gun-shot wounds, fractures and dislocations involving the spinal column are very serious traumatisms, frequently producing death immediately, or within a few hours. Even when this result does not follow, the danger is very great from the consecutive sequelæ.

Let us now take up the consideration of the second query. "Do inflammatory and other morbid changes ever arise from traumatic injuries which are entirely unaccompanied by immediate symptoms?" The conclusions reached by a careful analysis of the above question must depend to some extent on the interpretation which we give to this query. The fact must be admitted that it is not only possible for a patient to receive, under certain circumstances, severe traumatic injuries of which he remains a longer or shorter period wholly unconscious, but that these occurrences are by no means very rare. I can now recall a number of instances of this character occurring to officers and soldiers during the excitement of battle, while I was serving with the army. It also occasionally happens that drunkenness dulls the sensibilities in certain cases to such an extent as to render the patient oblivious to an injury, which he may have received, while the same condition will more or less embarrass, and sometimes even deceive, the surgeon who is attempting to make an examination. These statements possess only an indirect bearing on the question under consideration. The question relates to the immediate existence of symptoms and not to the observance of the same. A critical examination of this question in the same direction indicated in the above sentences, brings us to the following query: "Are results ever produced without causes?"—*i. e.*, "Do inflammatory and other morbid changes ever arise from traumatic injuries, which have failed to produce any lesions?" My experimental studies of the lesions of the cerebro-spinal axis have clearly demonstrated the fact, that pathological changes are occasionally produced in this centre—some of which are even apparent to the unaided eye—while others required the aid of the microscope; but which were not followed by any symptom indicative of these lesions during the life of the animal. The question will now be naturally asked with reference to these cases: Would they not have developed inflammatory changes at a later period? I have not before me the data which would justify me in positively asserting that a result was absolutely impossible; but I can aver that, in all these experiments—one hundred and forty-one—there is not a single case which warrants giving an affirmative answer. Surgical observations and analogous reasoning fully support the results obtained by our experimental research, not only with reference to the brain and spinal cord, but likewise in other organs of the body. Mr. Erichsen says in his recent work, "On Concussion of the Spine[1]": "There is a continuous chain of broken ill health, between the time of the occurrence of the accident and the development of the more serious symptoms. It is this that enables the surgeon to connect the two in the relation of cause and effect. This is not peculiar to railway injuries, but occurs in all cases of progressive paralysis after spinal concussion." It would appear from this quotation that Mr. Erichsen fully concurs with us in the opinion, that the production of a traumatic pathological lesion is always indicated by immediate symptoms when the degree of injury has been sufficient to entitle it to our consideration. Observation has taught us that the existence of a pathological lesion affords insufficient proof that this injury will be followed by inflammation or other morbid changes. In fact, every surgeon can recall to mind cases of severe traumatic injuries of the brain in which there were extensive larcerations or contusions of this organ; but, in which the secondary changes were entirely absent or very slight.

The same remark may also be made in regard to gross injuries in other parts; since the same general physiological and pathological principles prevail in the cerebro-spinal axis as in the other organs of the body. It is therefore entirely proper to introduce in connection with discussions of injuries of the cerebro-spinal axis, in many cases analogous reasoning drawn from studies and observations made in other parts of the body. It must be admitted as a general rule in surgery, that the more extensive and the more destructive the primary traumatism, the greater will be the danger from secondary disorganizing processes. Does it not therefore seem absurd to attribute to a single punctate hæmorrhage or even a half dozen of these little pathological lesions the

[1] A new and Revised Edition, p. 158. London, Longmans, Green & Co., 1882.

power of exciting a disorganizing process in a healthy spinal cord which may ultimately produce the death of the patient?

Is there a single well authenticated case in which such a result has followed from such a cause?

Let us now proceed to the consideration of our third question—which has a very important bearing on medico-legal cases and likewise on the diagnosis and treatment of myelitis arising from syphilitic disease. Mr. Erichsen says[1]: "It would appear that surgeons and writers on diseases of the nervous system have included four distinct pathological conditions under this one term, "Concussion of the Spine," viz.: 1. A jar or shake of the cord, disordering, to a greater or less degree, its functions without any lesion perceptible to the unaided eye. 2. Compression of the cord slowly produced by the extravasation of blood. 3. Compression of the cord by inflammatory exudations, serum, lymph, or pus within the spinal canal; and 4. Chronic alterations of the structure of the cord itself as the result of impairment of nutrition consequent on the occurrence of one or other of the preceding pathological states, but chiefly on the third."

We have already paid our respects in full to those subjects included under the headings 1 and 2; but we have yet to deal with those embraced under headings 3 and 4.

There exists no reason to doubt that inflammation, having its origin in the spinal cord or in its membranes, may be either acute or sub-acute, or that the former need be developed at an earlier day than the latter. The important question before us for our consideration, however, is, How soon do traumatic inflammations arise after the receipt of the traumatism? This question cannot be definitely answered—the answer must necessarily be a mere approximation. Nevertheless, I think that observation and experimentation fully justify the statement that traumatic inflammation commonly makes its appearance within four days after the receipt of the injury. In support of the above, I will here present a series of experiments which consisted in fracturing the right leg of twenty rabbits[2]: "This was done without producing a single compound fracture. The temperature details were as follows: Average temperature before the fracture 102·6; average temperature two hours afterwards 102·6; subsequent daily average temperature, first, 102·6; second, 102·6; third, 103·1; fourth, 103·1; sixth, 103; eighth, 103·1; tenth, 102·8; twelfth, 103; fifteenth, 102·8; seventeenth, 103·2; nineteenth, 103; twenty-second, 103."

In the case of the brain and spinal cord, when there is no open wound communication with these organs, the danger of inflammatory action is greatly diminished. Furthermore, the trivial character of lesions produced by concussion, and also the exceeding rarity of the traumatism—except when it is produced by lightning strokes, electric shocks or gun-shot wounds—all combine to impress me with grave doubts in regard to its being followed by inflammation. In fact, there is not sufficient proof to justify the conclusion that any case of traumatic myelitis, or meningo-myelitis, has ever had its origin from molecular disturbances or any pathological lesions which were invisible to the unaided eye, in an otherwise healthy spinal cord or its membranes.

Let us now briefly examine the history of concussion, in order that we may, if possible, discover how these troublesome errors were engrafted on the profession. The history of concussion dates from 1705, when M. Littre published his famous observations. A prisoner struck his bowed head against the wall of his cell and fell dead. The inspection of the head failed to reveal a contusion, tumor or wound in the scalp or a fracture of the skull. The cranium was opened when it was discovered that the brain did not nearly fill the interior of the skull, while the entire brain substance seemed harder to the touch —more compact than usual. This observation has been reported hundreds of times, and it was long claimed that it demonstrated the fact that a violent shaking of the substance of the brain was capable of producing death without any appreciable lesion. Permit me here to call attention to the fact that in the report before me there is no evidence to show that there was any post-mortem examination made of any portion of the body except the head. The autopsy of the head, viewed in the light of modern science, is entirely worthless; while the position in which the head was placed at the moment the injury was inflicted, suggests the possibility of a fracture or dislocation in some portion of the cervical region of the spine. It may be well to call attention to the fact that in this case, and all other cases of concussion reported prior to the middle of the present century, the microscope was not em-

[1] On Concussion of the Spine, p. 16. London, Longmans, Green & Co., 1882.

[2] Amputations and their Complications, p. 525. By B. A. Watson, M. D., Phila., P. Blakiston, Son. & Co., 1885.

ployed to aid in the discovery of the pathological lesions. Post-mortem examinations were very rarely made, even in cases of concussion of the brain, and consequently the case reported by M. Littre was accepted as a typical one. M. Littre, at the time he reported this case of so-called concussion of the brain, had become famous in the medical profession and, therefore, the following may be very properly applied to him: "Great errors seldom originate but with men of great minds."—Petrarch.

Mr. Erichsen in writing on concussion of the spine, in 1875, remarks:[1] "There is little opportunity, reason, or excuse for a post-mortem investigation of that structure, which is probably the one that is least frequently examined in the dead-house, viz., the spinal cord, as it is the one, the correct pathological investigation of which, is attended by more difficulties than that of any other organ of the body. So rare are post-mortem examinations of these cases, that no instance has occurred to me in hospital, or in private practice in which I could obtain one; and, with one exception, I can find no record in the transactions of societies or in the periodical literature of the day of any such instance. The only case, indeed, on record with which I am acquainted, in which a post-mortem examination has been made of the spinal cord of a person who had actually died from the remote effects of concussion of the spine from a railway collision, is one that was published in the 'Transactions of the Pathological Society,' by Dr. Lockhart Clark. He had been in a railway collision, and without any sign of external injury, fracture, dislocation wound, or bruise, began to manifest the usual nervous symptoms. He very gradually became partially paralyzed in the lower extremities, and died three years and a half after the accident." There is no reason to believe that this man died from even the remote effects of the traumatism. The history of this case entirely fails to connect the disease from which the patient died with the railway collision. Therefore it may be properly said of those who base an argument on this and all similar cases:

> "When people once are in the wrong,
> Each line they add is much too long;
> Who fastest walks, but walks astray
> Is only farthest from his way."
>
> —Prior.

[1] Concussion of the spine, nervous shock, etc., p. 177, et seq. New York. Wm. Wood & Co., 1875.

A NEW OPERATION FOR HARELIP.

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In all forms of harelip we find not an excess, but rather a defect of labial tissue—mucous membrane, prolabium and skin. The two portions of the upper lip, when brought together, are too small to form a lip of normal shape; it would require the interposition of a triangular piece of lip with apex towards the nose and base toward the border of the lip to obtain at once a lip of normal shape. The tissue defect is greatest in the skin, less manifest in the mucous membrane and prolabium; still in the majority of cases of complete harelip, the defects in these tissues also may be considerable.

It would thus seem natural to select a method of operating by which no tissue should be lost. In all the older methods the so-called "freshening" of the surfaces to be united requires the removal of at least a part of the prolabium, in some more, in others less, at the best as in the method of Nelaton[1] for small harelip, a displacement downward, to form a projection which must either disappear by retraction and atrophy or be removed, if present in excess, by a secondary operation.

About five years ago I was led to consider this question in a case of double harelip with rather defective lateral portions, in which I operated after the old method, and suppuration with consequent non-union took place. At the next attempt at union, the increased defect of tissue made union still more difficult than at the first operation. I therefore concluded to operate in my next case without the removal of any tissue, so as to have, at least, not lost anything in this respect if suppuration and non-union should make one or more later operations necessary. When I commenced to operate in this way I found it necessary to apply a separate row of sutures to the prolabium before bringing the edges of the skin together, thus closing the wound toward the mouth, and I soon found this to be a protection against infection. I have since that time never had any reason to abandon this method for any of the older methods.

I. OPERATION FOR UNILATERAL HARELIP.

1. *Incision.*—The incision is made at the border of the skin and prolabium, four to six millimeters or two to three lines deep, care being taken to guard against opening through the mucous membrane into the mouth.

It is necessary to draw the lip down in order to procure sufficient tension for the knife to divide the tissues; this traction causes anæmia of the border of the lip, making the line between the white skin and red prolabium indistinct. It is necessary to be careful to have the incision precisely in this line, because a small margin of prolabial tissue left with skin will, as I have seen in one case, leave a red brim along the line of union, necessitating a secondary operation for cosmetic reasons.

The length of the incision downward and outward depends upon the shape of the two portions of the separated lip. It is unnecessary, at the beginning of the operation, to estimate the length correctly, as the incision can be prolonged later on after some of the sutures have been applied and tied, according to the requirements of the shape of the lip when united.

2. *Sutures of the Prolabium.*—Interrupted sutures of fine silk are applied or inserted from the mucous surface so as to place the knot of the suture in the mouth, the first suture close to the top of the triangle as shown. The ends of the sutures are left long and held together with an artery forcep which is left hanging down. The succeeding sutures are applied in a similar manner at a distance of from three to five millimeters from each other in a number corresponding to the extent of the line of prolabium to be united. These prolabial sutures should include the mucous membrane and sub-mucous tissue only, or as little tissue as will suffice to keep the prolabial edges together. There must be no tension whatever at the line of union; if tension exists from shortness of the labial flabs, it must be overcome by the tension sutures which will be described later.

When, apparently, a sufficient number of these sutures have been applied, they are tied from above downward, or from the nose to the prolabium, the upper or nasal suture first, the forceps being held up toward the forehead. The united line must be long enough to give sufficient length to the lip and permit the lowest point of union to be a little lower down (toward the lower lip) than the sides of the lip and the corners of the mouth. The wound to be united is now closed against the mouth—is made a subcutaneous wound.

3. *Sutures of the Skin.*—(1.) Tension Sutures. According to the size of the defect, one or two tension sutures become necessary. I have entirely discarded the figure-of-eight suture with hairlip pins and also the button and shot sutures, and always employ an interrupted suture, using silk a little heavier than that used for the coaptation sutures of the prolabium and skin. In ordinary cases of single harelip one tension suture is sufficient. This suture enters the skin at a distance of one-quarter to half an inch from the cutaneous margin of the wound and is passed deeply down into the tissue of the lip. Care is taken not to have it pass through to the mouth, but to have it take in about two-thirds of the tissue of the lip, as this tension suture should be placed at or near a point where the margins of the wound are the greatest distance from each other—that is, near to the prolabium of the undivided portion of the lip. The tension suture is left with long ends held by artery forceps, and should not be tied until all the cutaneous coaptation sutures have been inserted.

(2.) Coaptation Sutures: These sutures for which common silk twist (which may be bought in dry goods stores, and disinfected in the usual manner by boiling it from fifteen to thirty minutes in a five per cent. solution of carbolic acid) is used, are applied from above downward, or from the nasal angle of the wound to the prolabium, at a distance of three to five millimeters. Three to five sutures are usually required. The lowest suture is passed through the ununited borders of the prolabium.

The wound is now carefully cleansed by small aseptic sponges and is finally touched with a sponge wrung out from a two and a half per cent. carbolic acid or a 1 to 2,000 sublimate solution.

If any hæmorrhage is present, it is stopped by continuous pressure, with an aseptic sponge, for a few minutes; if the hæmorrhage is slight it will cease upon tying the sutures.

The closure of the sutures should begin with the tension suture, so as to prevent the coaptation sutures from tearing through, as they would be liable to do if tied before all tension was done away with.

If, in drawing the sutures together, it is found that the middle of the lip does not come down low enough, or that there is still an indentation in the prolabium at the line of incision, it is advisable to prolong the cutaneo-prolabial incision a little on one or both sides, as the shape of the lip may require, and then apply an additional cutaneous coaptation suture.

When the cutaneous sutures are tied, the united wound should present the appearance shown.

4. *Dressing of the Wound.*—After careful cleansing of the line of the wound with

saturated solution of boracic acid, a layer of finely powdered boracic acid is dusted on, and a . cotton-collodion dressing applied. When I began to use this method, I plugged the nostril with borated cotton, but on account of its inconvenience to the patient, have now discontinued this practice. I do not use iodoform-cotton or iodoform-collodion dressing, for fear of iodoform poisoning; I prefer to have the nurse or mother dust finely powdered boracic acid into the nostril every three or four hours during the day.

A single or double strip of rubber adhesive plaster extending from ear to ear is applied over the collodion dressing in such a manner as to draw the two cheeks somewhat together, for the purpose of immobilizing the cheeks and lips when the child cries or nurses.

The dressing may be changed once a day, or every two or three days, if it remains dry. If, however, the dressing becomes soaked by nasal secretion, or milk when the child is nursed, it should be changed according to the necessity of the individual case.

5. *Removal of Sutures.*—The cutaneous coaptation sutures are removed after a week: the tension suture is allowed to remain two to four days longer, if it has not been loosened by pressure atrophy or pressure necrosis of its canal. After removal of the sutures, the borated cotton-collodion dressing and adhesive straps are re-applied to be continued until the suture canals have entirely healed, which takes place toward the end of the second or third week.

At the junction of the two lateral corners of the wound, there often remains after the suturing, a small quadrangular ununited space one to two millimeters in diameter where it may have been impossible to approximate the edges of the wound. A very fine suture may help to close this little defect. If, as is often the case, this little suture cuts through, the small defect heals by aseptic granulation, requiring only very little more time than the primary union of the remainder of the wound. It leaves at most a small cicatrix in the line of union at the border of the skin and prolabium and does not result in permanent disfigurement.

The prolabial sutures will sometimes cut through and peel off if the process of healing goes on undisturbed, or some of the sutures may remain and be removed after the end of the second or third week, at a time when union is strong enough to tolerate the manipulations necessary for their removal.

II. OPERATION FOR DOUBLE AND COMPLICATED HARELIP.

The operation for double and complicated harelip is performed on the same general principles, namely:

1. *Incision.*—The incision along the cutaneo-prolabial border should be of sufficient length to cover the space of defect. A second incision should be made along the cutaneo-prolabial border of the median peninsula of labial tissue below the nasal septum, if this peninsula is so situated as to be avilable for use in the information of the lip.

2. *Suture of the Prolabium.*—The prolabial sutures are applied as just described for the unilateral harelip, to be tied on the oral surface of the wound. The sutures should be first inserted on both sides of the nasal peninsula until this is wholly covered and until both lateral halves of the prolabium come together at the median point of its lower border. When this point is reached these two rows of sutures are tied.

The lateral prolabial borders are now united in the median line as low down or as far out as required to give to the lip the necessary length, as described in the operation for single harelip. These prolabial sutures are tied in the mouth usually without any tension, because the prolabium, when loosened from the skin and retroverted, furnishes a flap of sufficient size and elasticity to permit of ready approximation.

It is important, as before stated, that the linear incision should not penetrate into the mouth. When, as is often the case, the cleft extends through the nostril or nasal cavity, there is a lack of prolabium near to and in the nostril, and the prolabial sutures cannot be applied high up. It is usually possible by careful dissection and separation of the mucous membrane at the oral fornix of the lateral half of the upper lip, to displace the mucous membrane to some extent laterally, so that the uppermost suture may be applied reasonably high up toward the nostril.

When the prolabial sutures have been tied, the wound presents the appearance represented.

3. *Sutures of the Skin.*—Tension and coaptation sutures are now applied as follows:

(1.) Tension Sutures: For these sutures somewhat heavier silk should be employed. The upper suture should be inserted at the lower border of the nasal peninsula, the lower one near the lower border of the lip. They should be passed in and out at a dis-

tance of a quarter to half an inch of the border of the skin, and should include one-half, or a little more than one-half of the thickness of the lip. The ends should be held by artery forceps and should not be tied until all the skin sutures have been applied.

(2.) Coaptation Sutures: The coaptation sutures are now inserted from above downward. The first two or three sutures are inserted on both sides, between the lateral skin flap and the skin of the peninsula until this is united to the side flap throughout its entire circumference. The lateral flaps uniting in the median line just below the nasal peninsula, forms the upper portion of a Y-shaped line of union. Then the lower portion of the wound is united by two or three sutures, and a lower fourth suture is inserted through the two halves of the prolabium.

After thorough cleansing and disinfection of the wound, the sutures should be tied; first, the tension, and then the coaptation sutures.

4. *Dressing of the Wound.*—The wound should be dressed with borated cotton-collodion or in older patients, with iodoform-collodion. The nostrils, especially in older patients, should be loosely packed with borated or iodoform cotton. Over this, two straps of adhesive plaster should be applied. In older patients a strip of iodoform gauze should be laid in the mouth along the line of union of the prolabium. In new-born children the nostrils need not be packed with cotton and no iodoform gauze should be used: but these localities should be frequently dusted with finely powdered boracic acid. The dressing should be changed according to the amount of discharge, never more than once daily.

5. *Removal of Sutures.*—The coaptation sutures of the skin may be removed at the end of the first week; the tension sutures according to the amount of tension remaining, usually late in the second week; finally, what may remain of the prolabial sutures should be removed still later when the union is so solid that the upper lip is able to tolerate manipulation.

It is immaterial how narrow the new upper lip may appear to be immediately after the operation. Konig remarks (in speaking on plastic operations on the lips—keiloplastic operations following the extirpation of labial carcinomas) that the shape of the mouth, however deformed it may appear, on account of unequal size of the lower and upper lip in the first weeks after the operation, that in the course of some months the shape of the oral orifice and lips becomes more and more normal, surprisingly so when a sufficient time, from three to six months, has elapsed.

The all-important feature of the operation is to make the upper lip long enough in a sagittal direction, and to have exact union of the lower portion of the prolabium.

Apparatus to draw the cheeks together for the sake of immobilization or to diminish tension I have up to this time found superflous.

CONCLUSIONS.

The two main points in this harelip operation are the incision and the prolabial sutures.

1. The incision, a linear incision, is similar to that made in the operation for laceration of the perineum as proposed by Lawson Tait, and by him termed "flap-splitting." As stated above, this possesses the advantage of not sacrificing any tissue of the parts already more or less defective; on the other hand, repeated denudations made necessary by unsuccessful attempts at union would tend to make the lateral portions of the lip smaller and smaller. Furthermore, the linear incision, by loosening the everted prolabium (which is readily converted into mucous membrane by the simple change of position into the oral cavity) furnishes so much tissue for the posterior surface of the lip that union of the prolabial borders is easy, even before any tension sutures have been applied.

2. The prolabial sutures should be accurately applied. Fine curved needles should be used, the sutures made of fine silk. Interrupted sutures should be employed, in sufficient number and at sufficient intervals to furnish exact union. These sutures close the wound against the mouth and make the wound, so to speak, cutaneous instead of visceral, and thereby prevent infection from the ever-present multitude of microbes in the mouth. I believe that this suture will prove to be a potent factor in securing uniform results by preventing suppuration and non-union of the wound.

3. The cosmetic results have been all I could desire. If a slight indentation at the line of union of the prolabium has existed immediately after the operation, it has generally disappeared after a few months, provided the lip has been made long enough at the time of the operation.

4. I think that this method is applicable in all cases and should take the place of all the numerous older methods of operating.

Society Reports.

AMERICAN MEDICAL ASSOCIATION.

FORTY-SECOND ANNUAL MEETING, HELD IN WASHINGTON, D. C., ON TUESDAY, WEDNESDAY, THURSDAY AND FRIDAY, MAY 5, 6, 7 AND 8, 1891.

The Address of Welcome.—The proceedings of the general session were opened at Albaugh's Opera House, with an address of welcome to the members and delegates by the Hon. J. W. Ross, one of the Commissioners of the District of Columbia. He characterized the association as representing a constituency more numerous and powerful than any other on the face of the globe and one whose influence could not be over estimated. No similar organization ever occupied the vantage-ground held by the association for the discussion of topics calculated to enlarge its usefulness and power. One of the primary objects at which it was aiming was the promotion of such legislation as would tend to strengthen the profession in the performance of its duties. As a member of the bar he had often marveled at the fact that the common law, which respected the confidence that should exist between counsel and client, did not extend the same privilege and protection in the case of the physician and his patients. If any communication should be absolutely sacred and beyond the inquisition of the witness stand, it should be the statements made by an individual to his medical adviser. He thought that the time had come when any suitably expressed statements of the rights and requirements of the medical profession in this matter to the great body of lawmakers in Congress would be treated with the most profound respect.

The President's Address.—In the course of his address the President reminded his hearers that they were met solely for the promotion of science and for the good of the human race, to maintain the honor and dignity of the profession, and to hold aloft the flag of honorable medicine. They were there to lay their contributions, the results of study and observation, upon a common altar for the common good; to worship at the sacred shrine of medicine and to renew their fealty to the noble profession to which they had devoted their lives and linked their fortunes. As physicians they had an almost superhuman mission to fulfil. The chief object of their professional work was to preserve life and insure health. The goal of their ambition and desire was almost at the end of human capacity. It was their province as well as desire to know all the secrets of natural organization. They would have the formative crystal and the germinal spot made transparent. They would enter the microscopic world and witness the wonders therein revealed, and would, if possible, search into and unravel the very mysteries of the vital principle. To this perfect knowledge did they aspire. It was doubtful if man's intellect, great as it was, could ever compass all that he so earnestly desired; yet, by constant and faithful work, he might approach nearer and nearer to its consummation. In every part of the habitable world, blessed with the light of civilization, active, busy members of the profession, endowed with high culture and incited by the noblest resolves, were enthusiastically engaged in unraveling the mysteries of disease and seeking means and methods of treatment for the mitigation and relief of suffering and the prolongation of life. That the full benefit of the labors of American physicians might be attained and utilized, it was essential that the members of the profession, scattered over an area of country of almost inconceivable magnitude, should be brought into associated action and be organized into a body whose influence might be exerted over the length and breadth of the land, until a correct and noble sentiment was engendered in the mind of every member of the profession.

One of the great benefits conferred by the association was the establishment of an *esprit de corps* in the profession by the preparation and adoption of a code of ethics which comprised the great principles of truth, honor, and justice in regulating the relations of physicians to each other, to their patients, and to the public. This should be and was the written law, clearly defined, and of acknowledged force and effect, that prevailed from one end of the country to the other. It formed an impassable barrier between the sheep and the goats, the clean and the unclean, the physician and the charlatan. The strict observance of this code had done more than anything else to maintain harmony in the profession and to elevate it in the public estimation. It embodied the true spirit of the golden rule. Every one who entered the profession should be provided with a copy of the code, and should make it the guide of his medical life. It would serve as a talisman to the young physician, and would be the best safeguard against snares and pitfalls. It would seem that every honor-

able and high-minded member of the profession would be willing to indorse and be controlled by this code. It was to be regretted that there were some, who undoubtedly possessed a high order of talents and were justly distinguished, who had still an utter repugnance to the observance of certain parts of the code, and who held themselves aloof from the association in consequence. These gentlemen were probably as proud of the noble profession to which they belonged as any others were, and were equally anxious for the advancement of its interests, but could they conscientiously affirm that the motives by which they were influenced were pure and unselfish? Should these members put their opinion against the unbiased and unselfish judgment of the wisest and most experienced in the profession, nine-tenths of whom were guided in their actions by the spirit and letter of the code?

The fundamental and chief object of those who had originated the association was the improvement of the American system of medical education, and the elevation of the standard of requirements for the professional degree. Never had there been a greater expenditure of effort illumined with genius and learning to accomplish these two great objects, and, though many of the ideas were, in a country so diversified in character and extent, probably somewhat Utopian, there had been a gradual elevation of the standard of education fully equal to the progress of the country in every other department of human learning. The speaker was ready to maintain that the advantages and facilities for medical instruction in this country, even at the present time, were quite equal to those of any other, and that the medical colleges had produced as able, learned, and successful practitioners as had ever been graduated from other institutions. While he was willing to admit that our trans-atlantic brethren had excelled in experimental work, this country had taken the lead in all the practical departments of medical science.

Now that the Medical College Association had adopted all the requirements for improved medical education which this association had been so long urging, and for which in fact it was established, it was eminently proper and important to pass a resolution that after the changes contempleted had gone into effect no medical man who had received a degree from a college that had not adopted the improved method of teaching, and no professor or *attaché* of such college, should be eligible as a delegate or member of the association. This great moral support was due to those colleges which had so heartily taken up the burden that the association had for nearly half a century carried on its own shoulders. .

It might be well to call attention to the fact that original research and experimental investigation had not received the attention from American physicians which their importance demanded. The government, while the most liberal and best in the world, had never seemed to comprehend that the cause of science would be greatly advanced and its own honor increased by the establishment of schools for original investigation and experimental research. It had not kept pace with other enlightened governments in scientific enterprises. Such work must in the very nature of things be left, for the present at least, to the progressive spirit that animated the universities and to private laboratories which were being established in different sections of the country. It would probably be advisable to establish a Section in Experimental Research, which would tend to advance science and be greatly to the interest of the work of the association.

It had been a happy conception of one of their most distinguished presidents to make the establishment of an association *Journal* the burden of his inaugural address, and so powerfully had he impressed the minds of the members that a journal had sprung into existence which had in a short time given evidence of its power in the advancement of its purposes. It might require years to bring it to the desired standard. To effect so desirable an object it was necessary to make provision for an ample annual income. Nothing less than from seventy-five to a hundred thousand dollars should be considered ample. Next in importance to its financial needs was the selection of an editor, able, learned, and highly endowed with editorial tact and business qualifications, who would devote all his time and talent to his editorial duties. He should be empowered to spend money liberally in obtaining scientific material, original communications, translations, and reviews from every part of the world. He should have absolute control in the selection of matter for the journal. To such an editor a salary should be given that would render him independent. The sum should be not less than ten or fifteen thousand dollars a year. The necessary funds could, by proper exertion, be easily raised, and would

not only sustain the journal in the best style, but afford a sum in addition which could be used in many ways to the advantage of the association. The future location of the journal was a matter of such importance as to require careful consideration. Its weal or woe might depend upon the action taken at the present meeting. It had been suggested that the *Journal of the American Medical Association* should be moved to Washington, and it had been determined to submit the question to the members and delegates present at this session. He would beg the delegates and members of the association to consider well every side of this question before committing themselves to a vote. The *Journal* had now its home in Chicago, and had been there for eight years. It had already become the peer of many of the great weeklies of the country, and, if properly sustained by the profession and wisely and energetically conducted by its managers, it would become the recipient of the best thoughts of this country and the worthy exponent of the American profession. It had been proved that it could be more economically published in Chicago than in Washington, which latter city was by no means an important scientific or professional center. But it was the great center of American politics, to which everything was made subordinate, and it would be impossible, if the *Journal* was published in that city, to prevent its becoming contaminated by the political air.

The Relations of Contract Surgeons to the General Profession.—A special committee, appointed last year by the Medical Society of West Virginia to consider this subject, memorialized the association and appealed for its active co-operation to effect the redress of alleged abuses. The memorialists asked consideration of the question as to how far the rules adopted by railroad corporations for the government of the surgeons in their service infringed upon the rights of the profession at large as set forth in the code of ethics of the American Medical Association. It was well known that large bodies of men were in the employ of these corporations, and that these men lived in widely-scattered communities. The corporations had established systems of employing contract surgeons to attend to employees and passengers injured by accidents. It was also well known that these corporations had adopted rules for the government of the surgeons and of those injured which demanded that these surgeons should assume entire charge of such employees or passengers when injured, regardless of the rights of any outside medical men who might have been summoned and be in attendance upon the injured prior to the arrival of the company's surgeon, even though the physician first in attendance might be the family physician of the injured person. Notice had been given in most cases by the railroad companies waiving all responsibility in respect of injuries treated by non-contract men. It was assumed by the memorialists that this condition of affairs placed the contracting surgeons in direct conflict with the spirit of the code of ethics, and was an infringement upon the rights of the physician first called. The practice of accepting passes as compensation or in lieu of the regular fees was detrimental to the profession's interests by lowering the standard of surgical services, and was further demoralizing. It gave to these wealthy corporations services at far lower rates than the profession charged to individuals. It seemed that if members of the profession were at liberty to make contracts to furnish an unlimited service of the kind referred to for passes, and in some cases for small fixed money payments, without affecting their ethical standing, all stigma of unethical or unprofessional conduct should be removed from those of the profession who contracted with private individuals to furnish medical or surgical services, including medicines, by the month or year for fixed sums. A special committee was voted to sift the facts in respect to the points alleged in the memorial.

The Rush Monument Fund.—This subject was again brought before the association by Dr. A. L. Gihon, who for the seventh time reported slow progress toward the accumulation of the required fund. He made an earnest appeal for more enthusiasm in the matter, and propounded certain schemes that might be adopted for the purpose of raising the necessary money, which were approved.

The Address in General Medicine.—Dr. E. L. Shurly, of Detroit, delivered this address. He said he should present for consideration some points bearing on the relation of micro-organisms and toxines to the so-called zymotic or infectious diseases. Though laboratory work had done more than any other branch of science toward clearing up many vexed questions about physiological and pathological activities, yet, to be of lasting value and guidance, it must agree with general and clinical obser-

vation, and there were instances where laboratory and clinical observations had crossed swords. He was aware that it was generally accepted that bacteria or their spores were the essential cause of most, if not all, of the infective diseases, and the results of bacteriological investigation during the last few years would seem to support such a doctrine for the following reasons: 1. They could be isolated by color reactions and thus directly connected with the diseased body when found. 2. They required a certain time for development, corresponding to the period of incubation of such diseases, many of them being ectogenic and saprogenic, anaerobic or aerobic. They could thus live until the opportunity for invasion offered. Being endowed with life and multiplying enormously, they could resist destruction, Being protoplasmic and microscopic, they could more readily affiliate with animal fluids, cells, and tissues existing in a passive or quiescent state as well as in an active one. They could behave like vegetable seeds or spores, and preserve a long period of latency. For these and other reasons that might be adduced, we were led to believe that bacteria must be the cause in some way or other of the zymotio infectious diseases. But the question arose, How did they effect this result? Was it by mere local growth as parasites, or by the secretion of a material from themselves? In other words, were they secreting cells or did they induce at once chemical changes or fermentation of a destructive character with the formation of poisonous substances? It would be seen that many observers who were strong in their faith in the microbic origin of disease had not in every instance looked fairly at the question. The statement that no case of genuine cholera had as yet been reported in which the comma bacillus was absent had been disproved. In what bacteriological life were exemplified certain effects that had been observed connected with development? The career of bacteria *ad interim*, from one animal to another, was not well known. In the case of many of them, spores had never been demonstrated or their behavior formulated. Most of the species were destroyed by the healthy fluids or tissues, and hence their destiny depended upon a favorable nidus or pabulum, which meant disease. It was obvious that artificial culture in media outside the body or in the lower animals could only approximately reflect their real natural growth and development, for in no instance was it possible to transfer the artificially cultivated micro-organisms to an animal with the absolute certainty that nothing else accompanied the bacteria. The certain species only appeared to be pathogenic implied a state of specialization analogous to that of living nucleated cells. That their action was local primarily in all cases might be assumed, because their behavior in no way showed that they themselves invaded or maintained their existence in the blood or lymph. Therefore it was possible that pathogenic bacteria developed only where previous disease or an abnormal state of the body suitable to them existed; that, having found such, they took root, as it were, and by their catalytic action primarily, and secondarily by giving rise to a particular toxine, which in turn acted selectively as a tissue poison. If the bacilli of tuberculosis immediately produced the several diseases known as tubercular, why should any previously prepared nidus be necessary? If they or their still undemonstrated spores were constantly invading us, which was undoubtedly true, they must at once be destroyed, or, by gaining access to the fluids of the body, must set up, mechanically or otherwise, inflammation and their peculiar effects as any other foreign body would. But, as such micro-organisms must find just the proper conditions for development or not develop, we might assume that such a result implied previous disease, such as caseation, whether tuberculous or not. Complex and delicate processes attended the changes of proteids, and by radical or atomic substitution one might be changed readily into the other. We could see how probable it was that these micro-organisms might operate by a peculiar property which enabled them to decompose or exercise a catalytic action on certain states and kinds of proteids. It was manifest that diseases arising from the presence or entrance of micro-organisms must be therapeutically treated by attacking the cause or neutralizing its operation. The bacteria produced for themselves, or from the organic substances which they attacked, a poison which could be cultivated outside the body in some instances. Pathological chemistry had not demonstrated with exactness the nature of all these poisons, or classfied them, but it was fair to believe that this would be done in the near future. Although it was generally supposed that inorganic chemicals were not tissue poisons, but acted only upon the functions through the nervous system, still this view did not obtain when we observed the changes produced by iodine, bromine,

phosphorus, arsenic, and the silver, gold, platinum, and cupric salts, besides some of the vegetable alkaloids. In consideration of the changes that many of the remedies underwent in the stomach and intestines by oxidation or other processes before their absorption, it seemed to the speaker that the rational mode for the administration of drugs was to give them hypodermically, and in this way it was possible to command effects which could not otherwise be attained. Dr. Lauderer had obtained beneficial effects in phthisis from hypodermic injections of balsam of Peru. Behring had recently found that a number of chemical substances used hypodermically—such as aurochloride of sodium, naphthaline, and trichloride of iodine—were capable of neutralizing the poision of diphtheria in guinea-pigs, the latter substance being the most active of all. The same observer had also practiced in diphtheria, and with good effect, the inoculation of animals with bacillus cultures. Better effects had been obtained from the administration of bromide of gold by injection than from the bromide given in the ordinary way. The prompt results in the treatment of erysipelas with carbolic-acid injections were well known. The superior effects of the treatment of syphilis by the hypodermic injection of cyanide and bichloride of mercury and chloride of gold and sodium were striking. The hypodermic injection of chlorodyne in profuse diarrhœa was superior to its administration by the mouth. Ergot administered, even in considerable quantities, by the mouth would often fail, whereas one, or at most two, hypodermic injections of one-tenth or one-fifth of a grain of ergotin would generally stop a severe attack. Digitalis also acted upon the cells and vascular system more certainly when so administered. He might also mention the beneficial effects of strychnine used in the same manner in typhoid conditions. That animal poisons could be neutralized in the body he believed would soon be generally demonstrated. The recent experiments of Tyndale, of New York, for the cure of tuberculosis by vaccination promised well. Hemmeter had stopped the diphtheritic process by the inoculation of the patient with an erysipelas toxine, and it was stated that persons suffering from tinea tonsurans were proof against diphtheria. This would seem to show that there must be a sort of antagonism between animal and chemical poisons. Why could not more universal application be made of this principle with a view to obtaining more specific therapeutic agents? His object in choosing this subject had been to awaken a more general interest in physiological and pathological chemistry, and thus hasten the period of release from empiricism.

The Address in Surgery was on Stricture of the Rectum; its Ætiology, Pathology, Symptomatology, Diagnosis, and Treatment, by Dr. J. H. Matthews, of Louisville. He said he realized that in discussing this subject he should take positions contrary to the accepted teachings of the day, but assumed that the one great object of the meetings of this association was to elucidate and discuss subjects that were in doubt, those that were mooted. In considering the classification of the varieties of stricture of the rectum as given by Dr. Kelsey, he said that the idea intended to be conveyed by the term was that of a pathological change in the tissues, a deviation from the natural state brought about by disease; hence he objected to the consideration of congenital malformations of the rectum, or to defining them under the head of strictures of the same, for the reason that it was misleading to do so. It would be more to the point to call them atresias of the gut. Exception could also be made to the term acquired, stricture, and it was very easy to understand how one could acquire a stricture as the result of venery, but difficult to understand how one could acquire a spasmodic or cancerous stricture. He would adopt, for the sake of discussion, the classification into—

1. *Spasmodic.*—To this form of stricture he should prefer two objections. First, if it was true that such a condition ever existed, which he doubted, then it should not be classed as stricture at all, for the reason that no pathological change was manifest such as was necessary to constitute a stricture, and no treatment could be given in *per se.* In other words, it would be a symptom of some lesion or trouble outside the one called stricture. Secondly, he believed that, from the anatomical construction of the rectum, it would be utterly impossible for its lumen to be so constricted by spasmodic contraction of its muscular fibers as to be perceptible as an obstruction. In all his examinations of this part of the gut he had never seen a spasmodic contraction that could be called a stricture.

2. *Dysenteric.*—Although it was frequently stated that dysentery was a common cause of stricture of the rectum, he had never seen a case that convinced him of the truth of the statement or that it was a cause at all. He had many times seen patients

who gave him a history of having had dysentery; and who were treated for a long time for the affection; but close scrutiny of the case had revealed the fact that the so-called dysentery was caused by an already existing stricture and ulceration. Dysentery was the result, not the cause, of stricture. If a long-continued irritation was kept up in the rectum from any cause, the result would be, of course, an inflammatory exudate, resulting, perhaps, in ulceration and stricture; but, in searching for this as a cause, the road to a conclusion had not been plain enough for him to put dysentery in the list as a cause at all for stricture of the rectum.

3. *Tubercular.*—Since the discovery of the tubercle bacillus it was self-evident that tuberculosis was often met with in the mucous membrane and other structures of the rectum. If stricture and ulceration was the term used, he could make no objection to the classification of tuberculosis as a cause of ulceration. That ulceration frequently resulted from this diathesis or dyscrasia no one could doubt, or that the coincident stricture followed as from other well-known causes—notably syphilis—he could not agree. The disposition of tuberculous tissue everywhere was to break down. Before the capacious rectum was filled with tubercular deposit sufficient to stricture it, it would have broken down from ulceration, and so on; and it must be by deposition only that we could conceive of stricture from this cause, because cicatrization was so rare and so feeble in these parts that it would be the rarest accident to find it. In no instance had he ever seen a stricture of the bronchial tubes the result of tuberculosis. There would be just as much reason to expect it here as in the rectum; indeed, more.

4. *Inflammation.*—This term was so broad and comprehensive that we must admit inflammation as a cause of stricture of the gut—indeed, as the one grand and common cause. In no other way could a stricture be formed. It might be argued that a lesion or wound existing in the bowel, by the reparative process healed and left cicatricial tissue, and that the stricture was the result of the cicatrix, and not of plastic infiltration of the tissue. But there could have been no cicatrization if there had been no inflammatory process. If he were asked what was the prime cause of stricture of the rectum, he would answer, Inflammation. What caused the inflammation in many cases he did not know, but, ordinarily, it was syphilis, cancer, or trauma—if by trauma was meant a wound or lesion from any or many causes. Outside of the two first named, cancer and syphilis, he was satisfied that no one could tell the cause that originated the stricture. He wished to reiterate that, outside of these two well-recognized causes for stricture of the rectum, he was not prepared to admit any other as a well-known, recognized, indisputable cause.

After elaborating the points in the diagnosis and pathology of stricture, the speaker went on to deal with the question of treatment, premising that he should adhere in the strictest sense to the pathological condition—namely, a stricture. This entirely ruled out the treatment of proctitis or the subsequent ulceration, which was one cause of stricture, and brought him directly to the means of treating that which was the result of said causes. It must be granted that many times ulcerations which would otherwise end in stricture were cured before that condition resulted. This could not hold in cancer, and possibly not in syphilis. The methods practiced to-day for treating stricture of the rectum were: first, dilatation; second, incision; third, electrolysis and raclage; fourth, excision; fifth, colotomy. Of course, under the division he had made, general treatment was ruled out, and the gradual dilatation of the stricture was objectionable for the reason that by this form of repeated irritation, more plasma was thrown out and the stricture surface increased. It might be true that some temporary relief was afforded, but upon the contraction of the tissue more was lost than had been gained. He did not hold the view that by the passing of bougies through the strictured surface absorption of the tissue was caused, but believed that the converse was true. Why forcible divulsion was seldom applicable in these cases he could not understand. If a fibrous stricture existed, forcible divulsion was the best method. To-day we did not fear hæmorrhage, because we understood how to control it. He was very positive, then, in saying that, if dilatation of a stricture of the rectum was decided upon, it should be a forcible and a radical one. He was very partial to incision or incisions for the relief of stricture of the rectum. Of the two operations recommended, internal and external posterior linear proctotomy, he preferred the internal. It was urged for the external, which consisted in not only cutting through the strictured surface but also in dividing the sphincter muscle, that it was all-important to get the necessary drainage. He did not think so—and if he did, he be-

lieved the ill effects of dividing the sphincters outweighed the matter of drainage. His plan was to introduce a three- or four-valve speculum and, after dilating sufficiently for the purpose, a long, sharp knife was used to divide the constrictions of fibrous tissue down to a healthy base—not only in the median line, but in several places around the circumference of the gut. He then placed a tampon, through which was inserted a metallic tube for drainage and the escape of gases. This tampon was aseptic and usually dusted with powdered persulphate of iron. On the fourth day it was removed and the rectum was irrigated with the mercuric solution. If the operation was done effectually, he had never seen the necessity of employing the bougies afterward for the purpose of dilatation.

Excision.—He thought a better term to employ here would be extirpation. Excision of a stricture of the rectum conveyed but little idea of the operation. He could not appreciate the idea of excising a benign stricture. Extirpation of the rectum for malignant disease was an ideal operation. It was an axiom in surgery that in operating for cancer the whole growth must be removed, together with the glands that were involved. If the growth extended beyond the point where it was prudent to operate, it was best not to attempt its removal, except, perhaps, for total obstruction, not with any idea of cure. Kraske's operation was admirably suited to cancerous stricture. It consisted in resecting the diseased part through an opening made at the left side of the sacrum. This operation was only applicable in a certain class of cases. If the sigmoid flexure was involved, it would be of no use. According to this method, the soft parts were divided in the median line from the second sacral vertebra to the anus. The muscular attachments to the sacrum were divided as far as the edge of the opening on the left side. The coccyx was removed, the attachments of the two sacro-sciatic ligaments to the sacrum were cut, and the soft parts were drawn to the left side. If still more room was necessary, it might be gained by removing a part of the lower left side of the sacrum. If the bone was divided on a line beginning on the left edge, at the level of the three posterior sacral foramina, and running in a curve with the concavity to the left through the lower border of the three posterior sacral foramina, and through the fourth to the left lower border of the sacrum, the more important nerves were not injured and the sacral canal was not opened. In this way the lower part of the rectum as far as the sigmoid flexure might be resected. It would be found in this operation that the dissection was a very difficult one.

As to colotomy, he was forced to conclude that none of the arguments in its favor, instead of other methods for cancerous stricture, could be substantiated in fact. If he were asked when colotomy was justified in cancer of the rectum, he would answer, Not at all. But if there was a total obstruction of the sigmoid flexure from a cancerous mass, colotomy would be justifiable. Whenever a stricture other than malignant, especially when caused by syphilis, was located in the movable part of the gut or in the sigmoid flexure, either causing total obstruction or about to cause it, colotomy should be done. By this we prolonged life indefinitely. If, then, it was decided to do colotomy, which of the two operations was preferable—the lumbar or extra-peritoneal, or the iliac or intra-peritoneal? He thought the anatomical phrase used in designating the two should decide it.

The Association's Journal.—The vexed question as to whether the publication of the *Journal* of the association should continue in Chicago or be removed to Washington, which it was supposed would form the subject of warm debate, was settled by an overwhelming vote to maintain the present arrangements.

Recommendations for change in the editorial and business management of the *Journal* were rife.—*N. Y. Med. Jour.*

Selected Formulæ.

TREATMENT OF ACUTE CORYZA.

According to Dr. Tissié, in the *Revue de Laryng., d'Otolog. et de Rhinolog.*, May 1, 1891, acute coryza may be dependent upon certain difficulties of the general nutrition. In such cases, to effect a cure, these symptoms as well as the local manifestations should receive the physician's attention.

Locally, Dr. Tissié claims efficacy for inhalations of a few drops of the following mixture, poured upon absorbent paper:

℞

Carbolic acid	5 grammes.
Water of ammonia	5 "
Water	15 "
Alcohol	10 "

M. et Sig. For inhalation.

Antipyrine will be found valuable in relieving the headache accompanying acute coryza. Finally, the author advocates the

use of the following snuff, five or six times a day:

℞

Sub-nitrate of bismuth	6.00	grammes.
Powdered benzoin	6.00	"
Carbolic acid	4.00	"
Menthol	0.20	"
Morphine	0.03	" M.

Donna, in the *Province Médicale*, speaks highly of the value of ichthyol similarly used.

METRORRHAGIA.

℞

Ergotini	10.00	grammes.
Aq. dest.	70.00	"
Glycerini	20.00	"
Acid salicylici	0.20	"

M. et Sig. One teaspoonful in three teaspoonfuls of water for rectal injection.

—Reinstadier, in the *Raccoglitore Medico*, April 30, 1891.

ARISTOL IN GYNÆCOLOGY.

Swieciki, in the *Raccoglitore Medico*, April 30, 1891, gives the following formulæ for aristol, which he claims to have found most efficacious in twenty cases of metritis, hyperplasia of the cervix, parametritis and eczema of the vulva.

I.

Aristol	5	grammes.
Powdered gum arabic	9.5	"

To make 5 pencils about 5 centimetres long.

II.

Aristol	0,50–1,00	grammes.
Cocoa butter	9.5	"

To make 10 vaginal suppositories.

III.

Aristol	5.00	grammes.
Sugna	5.00	"
Lanolin	1.80	"

M. et fiat unguentum.

SALICYLATE OF MERCURY.

For hypodermic injections Vacher uses the following solution:

℞

Hydrarg. chloridi corrosiv	1 part.
Sodii salicylici	2 parts.
Aquæ destil	100 parts. M.

In this solution each cubic centimeter contains one centigram of salicylate of mercury. For use by the mouth a 1–1000 to 1–5000 solution should be used.—*Deutsche Medicin. Wochenschrift.*

CHRYSAROBIN FOR HÆMORRHOIDS.

Kossubudski (*Bul. Gén. Ther.*) has used with success this remedy proposed by Unna. For external hæmorrhoids this ointment is used:

℞

Chrysarobin	gr. viij.
Iodoform	gr. iij.
Ext. belladonnæ	gr. vj.
Petrolati	3 iv.

Ft. ung.

For internal use, a suppository:

℞

Chrysarobin	gr. j.
Iodoform	gr. ½.
Ext. belladonnæ	gr. ⅙.
Olei theobromæ	gr. xxx. M.

For one suppository.

DYSMENORRHŒA.

Monin (*L'Union Medicale*) recommends the following for dysmenorrhœa of chlorosis:

℞

Alcohol of melissa, Tincture of saffron, Tincture of iodine	aa 1½ ounces.

M. Twelve drops daily, before each of the two principal meals, for two months.

Every eight days, a warm bath, containing three and one-half ounces of chlorate of ammonia.—*Univ. Med. Mag.*

PRURITUS.

The following are given by *La Semaine Méd.* for pruritus:

℞

Pure resorcin	3 j.
Glycerin	3 ij.
Water	3 iv. M.

Sig.—For external use.

℞

Menthol	3 iij.
Glycerin	3 ij.
Water	3 iv. M.

Sig.—For external use.

APPLICATION OF ICHTHYOL

According to the *Revue Générale de Clinique et de Thérapeutique*, Unna employs the following preparation of ichthyol in the treatment of diseases of the skin:

℞

Ichthyol	25	parts.
Starch	50	"
Carbolic acid	2½	"
Water	22	"

The ichthyol and carbolic acid are dissolved in the water while hot, and the starch added.

CHRONIC BRONCHITIS.

L'Union Médicale recommends the following pill for chronic catarrhal bronchitis:

℞

Turpentine, Tar	aa 5ss.
Balsam of Peru	5jss.

Benzoate of sodium, a sufficient quantity to make 80 pills.

Two of these pills may be given three times a day, in cases in which there is a marked catarrhal exudation into the bronchial tubes.

THE
MEDICAL AND SURGICAL
REPORTER.

ISSUED EVERY SATURDAY.

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LEADING ARTICLE.

CURRETTING OF THE UTERUS IN PUERPERAL FEVER.

It is a surprising fact that while the microbic origin of puerperal fever has been recognized for some time, the use of the curette in these cases has only recently received any extensive consideration. If simple cleansing or irrigation of the parts proves insufficient to remove the cause of infection, one would surmise that the surgeon, at least, would at once attempt bolder and more efficacious means.

Fortunately, asepsis in child-birth has almost entirely done away with the possibility of puerperal infection, and this bugbear of obstetricians of a few years ago, has almost sunk out of existence. Yet, from varied causes, including carelessness from either physician or nurse, or pre-existing suppurative process, child-bed fever still manifests itself occasionally both in Hospital and private practice, and its prompt treatment is a serious question.

The rapidity with which death frequently follows the first symptoms of puerperal infection is remarkable, and brooks of no delay in treatment. Hecker reported a case, not long ago, wherein death occurred so quickly that a diagnosis of apoplexy seemed justifiable. The number of deaths from puerperal infection reported as occurring within the first twenty-four or forty-eight hours after the appearance of untoward symptoms, is startlingly large.

Could the physician know of the moment when infection has taken place, prompt removal of the infectious matter, by irrigations and douches, would surely prevent general infection. But this, unfortunately, is impossible.

In laparotomies, a prognosis may be advanced very early, for, if infected, the patient will usually show, within a few hours after the completion of the operation, signs of fear, restlessness, weakness and depression, before any objective symptoms have manifested themselves. It is not to be wondered at, therefore, that within a comparatively short time an incurable puerperal infection may be developed. Even in Hospitals, where the patient's temperature is taken three times a day, the attending physician is often forced to confess that he has come too late to render any help, or to stay the infectious process.

The question naturally arises as to whether —even although we have come apparently "too late,"—there is not some more energetic means than mere washing out of the womb, at our command, and can we not, by means of these more heroic measures gain what we have lost in time?

If, in general surgery, the operator arrives too late to effect primary healing or to perform a primary operation, cannot a more extensive operation be equally successful? The surgeon cuts, scrapes and cauterizes

until all dangerous substances are removed from the wound. Logically speaking, a similar therapeusis is surely applicable in puerperal infections. If irrigation and douching have failed, it is because by these means a removal of the infectious matter has not been effected. There may be two reasons for this. Either the patient has already become septic, and is, perhaps, lost; or, within the womb, there is still a colony of microbes, or in other words, a culture of streptococci. Should the former be the case—as subsequent symptoms in spite of all our efforts will show—the patient's fate is sealed, and it would only be cruelty to subject her to further operative interference. If general sepsis has not yet supervened, a thorough scraping out, or curretting of the womb, will frequently stop the infectious process.

It was in the above lines that Dr. E. V. Braun argued the feasability of the method advocated. The justification of the procedure will be better understood if puerperal fever is divided into three classes, viz., Pyæmic, Septicæmic and Sapræmic. In the last two classes, we are dealing with a process of decomposition in the womb; we find that saprophytes, and their ptomaines absorbed into the circulation have given rise to fever. There is no doubt but that a complete removal of this decomposing mass will effect a complete cure. As these sapræmic cases are usually light, and their prognosis good, there need be no question as to the justifiability of curretting.

So much for theory. Let us now review the practical value of the method, summed up from the experiences of operators both here and abroad.

Dr. Braun, in the *Arch. für Gynäkologie*, stated that this practice was adopted by him, especially in cases of sapræmic endometritis in child-bed. He used the method in 101 cases with the following results: Ninety-six of the cases were cured, and five died, but three out of these had already symptoms of general infection, a fourth died of purulent peritonitis attributed to escape of pus out of ostia of the tubes, and the fifth sank from hæmorrhage with septic symptoms ten days after the scraping. In over two-thirds of the 101 cases, the labor had proceeded normally, and there had been no visible evidence of any damage to the placenta, yet the curette never failed to bring away necrosed and putrid tissues, which, on microscopic examination, proved to be fragments of placenta or decidua. The procedure, according to Braun, is only to be undertaken in cases of rise of temperature in child-bed, due to endometritis. This complication can be recognized by the distinct arrest of involution of the uterus, fœtor of the lochia, and fever coming on early in child-bed without signs of pelvic inflammation outside the uterus. When signs of an extension of the inflammatory process are present, and, above all, where general infection is evident, scraping is contra-indicated. A rise of temperature sometimes occurs during the first week after the use of the curette, but Braun has never seen any parametritic exudation in his cases.

Both Braun and Dr. Heinrich Fritsch—who has of late given the subject careful attention, and contributed an interesting article in the *Deutsche Med. Wochenschrift*, April 16, 1891—agree that the operation is one comparatively free from danger. Hæmorrhages are seldom observed, neither is the procedure very painful. The uterus is washed out with a 1 in 1,000 solution of thymol before and after the scraping. The patient should be placed in the lateral position, the anterior portion of the os hooked carefully forward, and the vagina and perineum protected with a Sims speculum. In this way the womb may be scraped out without much inconvenience to the patient. That the womb may thus be thoroughly curretted has been shown by autopsies, and it is only in the folds of the cervix that the operation is not thorough. Braun, therefore, advocates a cauterization of this part. After the scraping and subsequent washing of the womb, an iodoform point is passed into the uterine cavity. Any abrasions of the vaginal mucous membrane are painted with pure tincture of iodine. The cervix and vagina are plugged for twenty-four hours, with iodoform gauze.

The danger of perforating the womb is but slight, especially if a broad, dull curette is used, and during the first days the womb is hard and firm. Here, however, we have varying opinions. Löhlein, at a *post-mortem* examination of a woman nine days after parturition, found the uterus soft and doughy. Liebman, of Triest, has also shown that in consumptives, and patients greatly run down, the uterus is easily perforated. Generally, however, in skilled hands, the operation may be safely performed, the uterus remaining firm until the fourth week.

Fritsch, while admitting with Braun the theoretic value of curretting for the removal of puerperal infection, nevertheless strongly condemns the general adoption of the methods, for the following reasons: first, because the differential diagnosis between sapræmic and streptococcic infection is most difficult at the outset; second, Fritsch asserts that the seat of the infection is neither in the decidua, nor in the contents of the womb; neither can we look upon the case in the light of a septic wound. The disease has a deeper seat, usually in the parametrium. Fritsch believes that the infection starts from the cervix, because this part suffers most severely in parturition, and as microbes may easily be deposited here, where lacerations are so frequent. The parametritis at the base of the broad ligament, is in the immediate vicinity, indeed, is almost a continuation of the wounded cervix. If the infectious matter is deposited on the surface of the dilated cervix, and this part is subsequently drawn together, the infection is thus mechanically carried to the deeper tissues, and is, therefore, undisturbed by irrigation. This infection is rapidly carried further in the loose tissue of the parametrium, and suppuration ensues. If the surgeon wishes to remove the seat of infection, large cuts should be made in the parametrium to facilitate the discharge of pus, or else the entire septic uterus should be removed. This, says Fritsch, would be rational. A partial removal of the decidua will certainly not accomplish the desired end.

If Fritsch, and others who argue similarly, are right, how do we account for the evidences of Braun's statistics which show a fall of temperature after curretting in 100 cases of puerperal infection? Perhaps, because all these cases were light, or it may be even that the subsequent irrigations and cauterization were productive of the good results and not the curretting.

Finally, it may be asked whether the method is ever positively indicated in these cases. To which it can only be answered that if the contents of the womb can be safely diagnosed as the cause of the trouble, it should be removed, and the procedure is as justifiable as the removal of a retained shred of the placenta. Further than this we cannot now go. The question is one, however, which critic and anti-critic will in time settle, and in the meanwhile these discussions and experiments may be watched with great interest.

CORRESPONDENCE.

COCAINE POISONING.

To the Editor M. and S. Reporter.—

Your editorial to-day raises anew the warning note touching cocaine and its dangers—one which the writer has sounded again and again, with a clinical support detailing nearly 300 cases, including 13 deaths.

In 1886, Dr. Wm. A. Hammond said, "he did not believe any dose of cocaine that could be taken was dangerous." That statement—mistaken and misleading—was promptly challenged by the writer, and that challenge so sustained by clinical facts in a paper: "Cocaine Dosage and Cocaine Addiction," read before the Med. Soc. of the Co. of Kings, Feb. 13, 1887; and another: "Cocaine Toxæmia," read before the Amer. Assoc. for the cure of inebriety, Nov. 8, 1887, that the British Med. Journal was impelled to say, editorially, "If it were needful to produce more proof of the unsoundness of Dr. Hammond's statement, Dr. Mattison has effectually done this."

In discussing my paper on "Cocainism," read before the D. C. Med. Soc., Washington, Dec. 24, 1890, Dr. Hammond confessed that he was wrong, and that nearly fatal results from cocaine had been noted under his own care.

In a fourth paper, "Cocaine Poisoning," by myself, read before the N. Y. Med. Legal Soc., March 9, 1891—to appear in THE REPORTER—the toxic record of cocaine was continued, making the most extensive resume of the subject ever presented.

Four words tell the story, COCAINE IS A POISON. Verbum Sap.

J. B. MATTISON.

Medical Director, Brooklyn Home for Habitues.

185 Brooklyn Avenue, May 2, '91.

PERISCOPE.

THERAPEUTICS.

HUMAN LYMPH IN THERAPEUTICS.

E. Magnat (*Le Bull. Médicale*, April 8, 1891) read a note to the Académie de Médecine on the employment of human lymph in the treatment of disease. The serous exhudation of blisters, which the author has designated as human lymph, was injected in cases laboring under a variety of diseases, such as ulcers of the leg, pulmonary tuberculosis, typhoid fever, and others. The results obtained were good.

CHLOROFORM IN TYPHOID FEVER.

In the treatment of typhoid fever, excellent results have been obtained by Stepp (*La Clinique*, Brux. Jan'y 15, 1891) with the internal administration of chloroform. The drug was given according to the following formula:

℞ Chloroform..... 1 gramme.
Water.....150 "
M. To be given in three doses, in the course of the twenty-four hours. The bottle should be shaken before using.

The influence of this treatment in the course of typhoid fever was certainly favorable. In the worst cases, insomnia and delirium, and the dryness of the mouth disappeared under the use of the remedy, while general amelioration was invariably observed. In from eight to ten days the fever diminished and convalescence began. In all the cases treated with chloroform the duration of the febrile period varied from nine to thirty days, eight being the minimum. The total amount of chloroform ingested to each patient varied from ten to twenty grammes. No untoward effects were ever observed in the course of the treatment. According to the author the favorable influence of chloroform in typhoid fever, is due to the germicide properties possessed by the drug. Recent researches show that the remedy passes through the circulation as chloroform, and as such is eliminated by the organism. In the second place, chloroform administered in the way and in the doses indicated above, acts as anæsthetic and thus aids to control excitability.

HYOSCINE IN MANIA AND INSOMNIA.

Malfilatre and Lemoine report in the *Gaz. Méd. de Paris* the result of a trial of hyoscine on some sixty-two patients, chiefly of the maniacal class (*Practitioner*, xxxvii, p. 321). The results obtained were very favorable. In the great majority of cases they found that they had either an immediate and continued hypnotic effect from very small (three to five-tenths cmm.) or moderate (1 cmm.) doses administered hypodermically, and in only a very were few larger doses required; and also that there did not appear to be such uncomfortable lasting after-symptoms as sometimes contra-indicate the employment of other hypnotics. These investigators feel justified in affirming that in hyoscine we have an excellent palliative in all conditions of insomnia with agitation, but they decline to commit themselves as regards its curative effects. Its inconveniences are the temporary intoxication it produces in some very sensitive individuals, and the necessity of steadily increasing the dose to produce the hypnotic action in some few others.—*The Dublin Journ. Med. Science.*

THE THERAPEUTIC USES OF EXALGINE.

The effects of this new remedy, exalgine or methylacetanilide, have been carefully studied by Desnos (*Bull. général de Therapeutique*, Feb. 15, 1891). After reviewing the literature of the subject, Desnos gives the results of his experience in the treatment of disease by the new drug.

Exalgine was tried in the treatment of affections essentially characterized by pain, particularly in facial neuralgias, due to lesion of the trigeminal, and even to those of the occipital nerve. Congestive neuralgias, due to cold or a rheumatic condition, usually yielded to moderate doses; but if relapses occurred, the medicament was continued for a long time in large doses. A case is reported of a woman suffering from neuralgia, in whom enucleation of the eyeball was not successful in relieving pain. She was given exalgine in doses of from 3 to 22½ grains, with the result that she was discharged cured in the course of thirteen days.

It was observed that the drug acted most favorably in neuralgias due to anæmia and syphilis. In diffused headaches and migraine, the results were negative or doubtful. In intercostal neuralgias the effects were generally satisfactory.

A persistent, very painful neuralgia of the brachial plexus was completely subdued by a dose of 22½ grains. In this case a pronounced tingling, which soon passed away, was experienced along the branches of the plexus. In neuralgias of the ileo-lumbar region, of a uterine origin, the drug did good; but relapses, due to the persistence of the lesion in the genital organs, only yielded to large doses.

Sciatic neuralgias were also checked by exalgine, one truly remarkable case being reported. The author has likewise obtained good results with the drug in the treatment of visceral neuralgias, the acute pains of locomotor ataxia, and has known exalgine to be of benefit in the pains of menstrual hysteralgia. A case of paralysis agitans, due to emotional causes, was cured by exalgine, and the drug was found of great service in certain cases of rheumatism.

In conclusion, Desnos considers exalgine a therapeutic agent of great value—an analgesic which is neither a hypnotic nor an antithermic in the proper sense of the word. To obtain the good effects of the drug, it should be given in full amounts. The usual dose is 3¾ grains, but 15 to 26 grains may be given without producing deleterious effects.—*Univ. Med. Mag.*

AGARICINE IN THE TREATMENT OF NIGHT SWEATS.

This drug has been used by Bocquillon (*Province Méd.*, Jan. 10, 1891) in the treatment of pulmonary phthisis. In these cases the remedy diminished the diarrhœa, lessened the cough and produced a more quiet sleep. Doses of from 5 to 8 milligrammes were given hypodermatically from 5 to 6 hours before the appearance of the sweats. Seifurt employs for hypodermatic use, the following solution:

℞

Agaricine	0.95 grammes.
Absolute alcohol	4.50 grammes.
Glycerine	5.50 grammes.

M. This is a ½ per cent solution of which a syringefull can be given 5 hours before the appearance of the sweats.

THE THERAPEUTIC EFFECT OF STRYCHNINE IN CARDIAC AFFECTIONS.

The *Medicinisch-chirurgische Rundschau*, February 1st, has an extended notice of a recent paper by Professor Baldo Zaniboni, of Padua, on this subject. Zaniboni's article is based on a large number of clinical observations, with sphygmographic tracings, and appeared originally in the *Revista veneta*, Nos. 2 and 3, 1890. The following are his most important conclusions:

Strychnine is without question a very efficient exciter of cardiac activity. By its use the systolic impulse is strengthened, the diastole is prolonged, and attacks of arhythmia are cut short; subsequently the arterial tension is increased and the pulse-rate, if rapid, is slowed; if retarded, is accelerated. Acute dilatation and the dangers of heart failure, especially of the right side, are removed. Respiration becomes freer, and attacks of dyspnœa are completely relieved. Only in cases in which the nervous and muscular elements of the heart are no longer susceptible of stimulation does strychnine remain without effect. Œdema, even when it has resisted treatment with digitalis, disappears quickly, and there is free diuresis without the occurrence of albuminuria, such as follows the use of strophanthus. The bodily temperature is not noticeably affected. The appetite improves and the action of the bowels is regulated in consequence of increased persistalsis. The contractility of the arteries is heightened by the vaso-motor action of the drug. The hypodermic injection of strychnine is well borne, and with careful antisepsis causes no local reaction. Beginning with one-sixty-fifth of a grain, the dose may be increased to one-thirtieth of a grain three or four times a day, without producing subjective or objective disturbances. The treatment may be stopped abruptly, even when the largest doses are being given, without causing any unpleasant symptoms. The effect of the salt is seen very quickly (in about ten minutes) after the injection, and lasts for several hours. Even after the long-continued use of strychnine no symptoms were noticed that pointed to any cumulative action of the drug.—*N. Y. Med. Jour.*

BRONCHITIS PRODUCED BY THE VAPORS OF PICRIC ACID.

A peculiar form of bronchitis produced by the vapors of picric acid is described by Regnault and Sarlet (*Annales d'hygiene*, March, 1891). The malady is characterized by paroxysms of dyspnœa, frequency of respirations, and of cough and the absence of a glairy expectoration at the end of the crisis. The paroxysms come during the day and also during the night. Death is rarely produced.

In a fatal case, observed by the authors, the patient's death was due to an intercurrent malady: *la grippe*. A chemical analysis showed the presence of picric acid in the urine, the blood and the liver. The patient, poisoned by the picric acid vapors, exhibited a condition of anæmia and a yellowish coloration of the skin, of the hairs on the surface of the body and of the parts, especially, mostly exposed to the toxic emanations. The diagnosis of the peculiar dyspnœa and asthma was easily made, especially after the analysis of the urine, which usually contained picric acid.

MEDICINE.

NEURASTHENIC STIGMATA.

Recent issues of the *Union Médicale* contain a résumé of Dr. Bouveret's lectures on neurasthenia. While the symptoms of this interesting disease are extremely varied and numerous, according to Dr. Bouveret's view there are certain distinct manifestations which are sufficiently constant to be called the stigmata of neurasthenia. These are headache, insomnia, muscular weakness, vertebral pain, atonic gastro-intestinal dyspepsia, to which are frequently added habitual dilatation of the pupil owing to feeble reaction to light, together with discoloration and objective and subjective coldness of the hands and feet.

While the headache is more or less persistent, the pain is not particularly severe, the sensation being more that of heaviness, fulness and constriction, as of a hand or cap pressing upon the scalp, giving rise to what Charcot calls the helmet symptom. In event of intense headache, which sometimes exists, it is circumscribed, may be limited to the forehead, one temple or both, to the occiput, or the back of the neck. Aching and weariness in the neck are common, and in themselves are rather good signs of neurasthenia. The neurasthenic headache is increased by work, intellectual effort, noise, and sudden emotion. During these exacerbations vertigo is not infrequent. True migraine may complicate this cephalalgia and render the condition doubly trying. Insomnia is of the persistent order, and is rebellious to treatment. It may be absent in women. In certain rare cases, irrespective of sex, the fatigue of work is followed by attacks of irresistible somnolence. Dreams are common, and more or less distressing. Sleep may come only toward morning, or it may visit the patient early in the night, leaving him to the horrors of wakeful visions after an hour or two. In either case the sufferer rises unrefreshed, in a condition of extreme weariness, without energy and without hope, and as thoroughly sapped as if he had been up all night.

Mental depression in neurasthenia expresses itself as exhaustion of all the mental faculties. There is loss of memory, of judgment, of will, inability to fix the attention for any length of time, and to resist sufficiently the influence of psychic impressions. Impairment of will is the keynote to the psychic state in neurasthenia. It is impossible for the patient to pursue the even tenor of his way. The character changes. The thousand and one petty annoyances of daily life are converted into so many excuses for irritability, anger, and exhibitions of bad temper. General weakness exists, and a notable diminution of muscular force is usually present. After slight emotion, moderate physical fatigue, sometimes without assignable cause, there will come a sudden feeling of profound prostration and complete loss of strength, together with painful fatigue in the calves, knees and thighs. Vertebral pain is almost as common as headache. It is a sensation of heat, burning, lassitude, and strain along the spine. This has favorite points of location: the seventh cervical vertebræ, the lumbar vertebræ, and the sacral region. It may exist in the coccyx alone.

There are two forms of neurasthenic gastro-intestinal atony. In the first, only functional disturbances appear. In the second, the patient emaciates, loses strength, and objective symptoms are present. Abdominal examination reveals prolapse and dilatation of the stomach, flabbiness of the anterior abdominal parietes, together with descent of the kidneys and liver in certain instances, completing the anatomical complexus that Glenard has described under the title of enteroptosis. There are cases, not so rare either, where, after the earliest developments of neurasthenia, the patient passes progressively and rapidly from functional gastro-intestinal atony to interoptosis of serious moment.

A chemical hypothesis to account for neurasthenic phenomena has recently been proposed by Professor Kowaleski, of Charkow, of which mention appears in the *American Journal of Insanity*, January, 1891. Acquired neurasthenia may be divided into two principal varieties: one where there is excessive mental strain or exertion without sufficient nourishment. The brain is starved with the rest of the body, and naturally fails to perform its functions. The other form of the disease is

found in those who lead lives of intense mental activity within a narrow field, and who have but little physical exercise. The tendency of modern civilization to specialism leads to the restricting of mental activity to a limited range of topics, tending to local exhaustion of the brain. This exhaustion may come about in spite of an abundant supply of food. In consequence of the sedentary lives led by persons engaged in intellectual pursuits, food may aggravate the evil, poisoning the brain by imperfectly assimilated material. Alcohol, tobacco, tea and coffee taken to stimulate flagging energies, together with late hours to make good the losses of the day, serve to render bad matters worse. The congenital form of neurasthenia, when not connected with anatomical anomalies of the nervous system that can be demonstrated, must be considered due to defect of organization that conjecture may reasonably ascribe to its abnormal chemical constitution. In view of the frequent appearance of neurasthenia and allied disorders among children of drunkards, it seems probable that poisoning of the nervous system of the parent may result in defective chemical composition of the nerve-elements in the offspring, this being latter-day retribution following the eating of sour grapes by modern fathers.—*Med. Rec.*

GLYCOSURIA AND DIABETES.

Moritz (*Münchener med. Wochenschrift*, Jan. 6, 1891) considers it probable that grape sugar is present in normal urine from the fact that the characteristic reaction with phenolhydrocine can be demonstrated. There are a great many cases where grape sugar appears in the urine which are not real diabetes mellitus; this may be called simple glycosuria. This symptom is comparatively harmless in the absence of all the severe general symptoms—emaciation, loss of strength, thirst, furunculosis, etc. A combination of these general symptoms with sugar in the urine determines a diagnosis of diabetes mellitis, but it is not safe to exclude the disease in all cases where sugar appears without the general symptoms, for there are certain instances where a small amount of sugar constantly present in the urine is the only symptom until a sudden outbreak of a general character occurs.

It is impossible to fix upon any one symptom which distinguishes simple glycosuria from true diabetes mellitus, but simple glycosuria may be said to be an increase of the normal amount of sugar, which disappears with the cause, while diabetes mellitus is a true disease, chronic in nature, its characteristic being the persistence of the glycosuria. The author divides all cases into two groups—glycosuria occurring under pathological conditions, and glycosuria occuring under physiological conditions. He then quotes many pathological conditions give rise to glycosuria—injury to ihe floor of the fourth ventricle, extirpation of the pancreas, cirrhosis of the liver, and apoplexy, being among the number. Among the physiological conditions he considers the puerperium as the most import. Eighty per cent of all lying-in women have from ·8 per cent. to 1 per cent of sugar in the urine. The so-called alimentary form of glycosuria occurs after the ingestion of a large amount of sugar. Some authors consider that this tendency to excrete sugar shows a disposition toward diabetes mellitis. Where this tendency to glycosuria is noticed only after the ingestion of sugar it may be considered physiological, bnt where it is found after a meal of starchy foods it may be considered pathological.

For clinical purposes diabetes mellitus may be divided into a mild and a severe form. In the first the sugar is taken from the carbohydrates of the food; in the latter this is not the case. In suspected cases the urine should be examined some hours after a meal of carbohydrates with little or no sugar. If sugar is present in the urine a diagnosis of diabetes mellitus may be made; if it is absent the disease may be excluded. In certain cases where a large amount of urine of low specific gravity is excreted, it is necessary to examine the urine passed shortly after the meals, and not a specimen of the mixed urine.

The author considers the fermentation test the only entirely reliable one. He advises the following simple apparatus: A test-tube is filled with a mixture of urine and yeast and is stopped with a gum cork perforated with a U-shaped tube. Two control tubes are filled, one with normal urine and yeast, and another with the suspected urine with yeast, and a little sugar added. Care must be taken that the urine is not rendered antiseptic by the administration of salol or salicylic acid to the patient. If the urine contains sugar, carbonic acid gas will collect in the upper part of the tube. He advises the combination of this test with one of the reduction tests to make the diagnosis absolutely sure.—*Univ. Med. Mag.*

SURGERY.

INSTANCES OF FOREIGN BODIES LODGED IN THE BODY.

Francis L. Haynes, gives in the *Annals of Surgery* a collection of cases of this nature which is of much interest:

I. A TOOTH IN A BRONCHUS PRODUCES A PULMONARY ABSCESS. IT IS EXPELLED SPONTANEOUSLY AND THE PATIENT RECOVERS.

A middle-aged man presented all the symptoms of a copiously suppurating cavity in the apex of the right lung, and was supposed to be afflicted with consumption. After I had attended him for three months, during which he improved greatly, he expelled a tooth from the lung during a severe paroxysm of coughing. Recovery from all symptoms of pulmonary disease was rapid and complete.

A minute cross-examination now showed for the first time that, one year previously, the man had, as he supposed, swallowed a tooth immediately after its extraction, and that his illness had dated from that time.

II. A PIECE OF SHEEP'S VERTEBRA IN THE LUNG PRODUCES AN ABSCESS WHICH, AFTER ONE YEAR, RESULTS IN DEATH.

A woman, æt. 50, while hastily swallowing some soup, felt that a hard substance had passed into the air passages. An immense cavity rapidly developed in the lower lobe of the right lung. After six months, during a severe paroxysm of coughing, a large piece of the body of a sheep's vertebra, the shape of a maltese cross (measuring 1 by ½ by ½ inch) was expelled. The cavity, however, continued to suppurate and the woman died about a year after the date of the accident. Prof. S. D. Gross examined this case but did not suggest any operative procedure.

III. A BEAN IN THE AIR PASSAGES CAUSES SPEEDY DEATH.

A boy, æt. 5, while holding some beans in his mouth, suddenly exclaimed that one had "gone down the wrong way." Suffocative symptoms were at once noted and continued until death 36 hours afterward. Physical examination showed that no air entered the right lung. The parents would not permit an operation.

IV. REMOVAL OF THE TIP OF A HARD RUBBER SOUND FROM THE PREGNANT UTERUS.

A healthy woman, two months pregnant, while inserting a hard rubber sound into the uterus, broke off a piece two inches long, which remained in the organ. Dr. E. A. Follansbee was consulted, and asked me to assist in the management of the case. With the metallic sound the body could readily be felt, but it lay across the uterus, and its ends seemed to be embedded in the mucosa; it could not be removed until the cervix was dilated, which was at once accomplished by Goodell's dilator, under ether narcosis. The body was now readily removed by a slender pedicel forceps guided by the finger. As the membranes had been ruptured by the patient's probing, the uterus was emptied by the finger, and washed out.

V. A GLASS DISC REMAINS IN THE VAGINA FOR TEN YEARS, CAUSING A STRICTURE, WHICH REQUIRES TO BE INCISED, THAT THE DISC MAY BE REMOVED.

A woman, æt. 60, had worn a glass disc in the vagina continuously, for the relief of prolapsus, for ten years. As it finally produced a purulent discharge she asked me to remove it. One and a half inch up the vagina a stricture barely admitting the index tip was felt. It was incised in the median line posteriorly and a disc two inches in diameter removed. Unfortunately hæmostasis was carelessly made, and the patient bled for two days before she thought it worth her while to send for me. It took two months to cure the resulting anæmia. After six months the patient reported that she was well and that the prolapsus had not recurred.

VI. A CHILD IS TREATED FOR NASAL CATARRH FOR FOUR YEARS, AND RECOVERS ON THE REMOVAL OF A SHOE BUTTON FROM THE NOSE.

A girl, æt. 8, had received much unavailing treatment for the relief of a profuse purulent discharge from the right nostril. On inserting a probe I distinctly felt a smooth hard body buried in a mass of rotton tissue between the inferior and middle turbinated bones about one inch behind the tip of the nose. The body, which was supposed to be dead bone, was easily removed, and proved to be an ordinary gaiter button. Recovery was rapid and complete.

FRACTURE OF THE LARYNX.

An interesting case of fracture of the larynx is reported by Dr. Sokolowski, in the *Centralblatt für die med. Wissenschaften*, April 11, 1891. The patient was a millhand, twenty years old, who was caught in the driving wheel of a machine, by her apron, which was fastened about her neck, and

thrown some distance. She immediately experienced severe pain in the larynx, difficulty in breathing, and expectorated a considerable quantity of blood. The neck was greatly swollen and crepitation over the larynx was distinctly felt, and a considerable depression of the cartilage on the left side to be seen. The laryngoscope showed two inflamed swellings immediately below the epiglottis. Tracheotomy being indicated, an incision over the larynx was made and the fracture found. One fragment of cartilage was pushed into the windpipe. This was removed, and breathing at once became easy. Still the extent of the fracture was such that a tube was inserted and left in place. The patient ultimately recovered.

SUFFOCATING GOITRE.

The following interesting case of extirpation of a goitre, is reported in the *Revue de Laryngologié, d'Otolog. et de Rhinolog.*, May 1, 1891. The patient was an Italian, seventeen years old, and Dr. Arthur Berti, of Modène, the operator. The man came from a district where goitre was very rare. His previous family histories were negative. Up to his thirteenth year he had always enjoyed good health. At this time a tumor appeared, of about the size of a small nut, a little to the right of the median line of the throat. The growth was freely movable, hard, and indolent. Soon after the tumor began to rapidly increase in size, until, when the patient presented himself at the hospital, it had attained the size of a large orange. Respiration was difficult and deglutition impossible. Extirpation was performed only with great difficulty, as the growth completely surrounded the trachea, nevertheless, its entire removal was effected. His wound healed up within six days, and no subsequent trouble was experienced by the patient.

GONORRHŒAL EPIDIDYMITIS.

Drs. Martin and A. C. Wood, in *The University Medical Magazine* in a study of this, the most frequent complication of gonorrhœa, reach the following conclusions:

1. Gonorrhœal epididymitis occurs most frequently in those who have received no treatment for the original urethritis. Its outbreak is frequently determined by violent or long-continued physical exertion, or by venereal excess.

2. The resultant induration of a gonorrhœal epididymitis does not cause obliteration of the convoluted duct in the majority of cases. Statistics on this point are misleading, from the fact that it is practically only the few sterile patients who are subsequently observed by surgeons, and hence these form the greater number of the reported tabulations.

Of four cases of double epididymitis observed by us, not under treatment for sterility, there was an abundant discharge of spermatozoa in three.

3. Unilateral epididymitis may, in exceptional cases, cause permanent sterility. During the acute attack very few spermatozoa are found in the semen.

4. Obliteration of the duct does not cause atrophy of the testicle.

5. Pain, tenderness and swelling in the groin, dependent on funiculitis, practically always precede gonorrhœal epididymitis. Prompt treatment at this stage may abort the inflammation of the epididymus.

6. The development of gonorrhœal epididymitis is, in a great measure, avoided by the use of antiseptics by the mouth, and the application of a suspensory bandage to the scrotum.

7. The pain and disability usually attendant on gonorrhœal epididymitis are promptly allayed by puncture, or aspiration of the serous exudate contained in the tunica vaginalis and the cellular tissue placed behind and above the epididymus, followed by the application to the scrotum of a thick layer of cotton, over which is placed a Mackintosh suspensory, so made that it presses the inflamed organ upward against the pubes; and, by means of lacings at the side, can be so drawn in that uniform lateral support is secured. Punctures are necessary only in the most acute cases.

8. The subsequent induration after the acute stage is most quickly resolved by a continuance of the dressing above described, together with the local application of belladonna and mercury ointment, and the internal administration of iodide of potassium.

GYNÆCOLOGY.

CANCER OF THE BREAST TREATED BY INJECTION OF METHYL-VIOLET.

Dr. Edw. T. Grün, in the *Brit. Med. Jour.* writes: The patient, whose case is described below, presented herself suffering from a well-marked circumscribed indurated tumor of the breast, about the size of a small egg. The case was considered a particularly suitable one for testing the efficacy

of Dr. Mosetig's treatment by injection of methyl-violet.

The treatment having been explained to the patient, her consent was readily obtained, and a course of twenty injections was prescribed. This treatment was commenced with a dose of 10 minims of 1 part of methyl-violet in 300 parts sterilized water; administered February 7th, 1891. The injections were given daily. The first ten injections produced no pain and no inflammation of the breast, but, after the tenth injection, a slight redness of the skin became apparent, which increased after each injection. On the fifteenth day of treatment some suppuration of the breast tissue was present, masking, to a great extent, the tumor. The injections were still continued. After the twentieth injection, on careful examination, the tumor being still present, it was decided to remove the breast in the ordinary manner.

The operation was performed by Dr. Hugh Fenton, with strict aseptic precautions, after the manner of Dr. Edgar Kurz, of Florence, described in the *Deutsche medicinische Wochenschrift* of November 20th, 1890, and, although considerable suppuration was present in the breast, the wound healed by first intention at the end of seven days, the only application to the breast having been dry Gamgee tissue, carefully sterilized previous to the operation in the hot air sterilizer, as were all the instruments used in the operation, no carbolic acid or iodoform being used at any time during or after the operation.

The breast, on examination after removal, was found to contain a typical tumor of the scirrhous cancer variety. The growth presented no alteration that could be attributed to the methyl-violet, even when examined, after hardening and staining, by very high microscopic power, such as the $\frac{1}{12}$th and $\frac{1}{18}$th oil emersion. No degeneration of the cancer structure could be observed around the growth. Considerable suppuration of the glandular tissue of the breast had taken place, which, no doubt, under ordinary antiseptic dressing, would have considerably retarded pimary union. The result of the treatment by methyl-violet must, in this case, be regarded as purely negative. The rapid healing of the wound speaks greatly in favor of the aseptic sterilized dressing, now so largely adopted on the Continent with such good results, Dr. Kurtz giving a mortality of 2 in 169 cases of operations, of amputations, resections, laparotomies for perforation in typhoid fever, and other major operations.

WOUNDS OF THE URETERS IN LAPAROTOMIES.

During the last session of the French Congress of Surgery, Dr. Pozzi read a paper on wounds of the ureters in laparotomies. Pozzi has succeeded in finding the histories of several cases, including one observed by Gusseron and one occurring in his own experience.

If the wound of the ureter is lateral it is possible to make a suture. In one case thus treated the patient died. In another reported by Gusseron recovery followed the operation. Wounds of the ureters are most likely to be produced during the removal of retro-peritoneal cysts.

The case reported by Pozzi was that of a woman fifty-three years old, with an intraligamentous cyst. The tumor had been of rapid growth, and the patient's general condition was very poor. Laparotomy was performed, and revealed a large red tumor with a rough surface. The tumor was enucleated with great difficulty, being firmly adherent. During the course of the operation one of the ureters, which was attached to the tumor, was cut through. The operation was completed, a Mickulicz tampon being used and the end of the ureter sutured to the abdominal wound. Subsequently, nephrectomy was performed, and the patient made a good recovery.

OBSTETRICS.

OVARIAN PREGNANCY.

At a recent meeting of the Royal Medical Society of Vienna, reported in the *Wiener Med. Presse*, April 12, 1891, Dr. Herzfeld told of an interesting case of ovarian pregnancy. The patient was a multipara, thirty-three years old, and on March 12, gave birth to a child at the normal end of gestation. After delivery the abdomen remained distended, and a second fœtus was clearly definable above the empty womb. The patient did not come into the hospital until the fœtus was dead. Dr. Herzfeld performed laparotomy and removed the fœtus with ease, it being attached to the adnexa of the uterus by a small pedicle. The question of tubal pregnancy could be set aside as the right tube could be traced in its entire length. The uterus was empty and the left adnexa normal. An anatomical examination proved the case to be one of ovarian pregnancy. This case is not only of interest because it occurred in conjunction with a normal pregnancy, but especially so as it

definitely proves the possibility of a pure ovarian pregnancy, and because it continued until full term.

EPILEPSY FROM A DEPRESSED FRACTURE PRODUCED WITH THE OBSTETRIC FORCEPS.

A boy, sixteen years old, came under Mr. Lane's care for epilepsy (*Lancet*, Jan. 17, 1891). He had been subject to these fits for two years, or from the age of fourteen years. When he was about to have a fit he noticed a twitching at the junction of the middle and lower thirds of the leg on its outer aspect, and his foot and knee then jerked in a manner that resembled ankle clonus and knee-jerk. A pain then ran up the outer side of the leg and thigh, through the left side of the trunk to the arm, then to the left side of the face, and, when the fit was severe, to the right arm.

On examination, a groove three inches and a quarter long was found on the right side of the head, extending from an inch behind the coronal suture to about the same distance in front of the lambdoid suture. Its anterior extremity was vertically above the external auditory meatus, and its lower limit reached just below the temporal ridge. From this it extended downward and backward toward the external occipital protuberance. The left arm was the smaller and weaker, its muscles were less firm and its movements were distinctly clumsy. There was no difference in the appearance of the muscles of the legs, but the patient had never had the same confidence in the left that he had in the right leg. By simply raising the left foot to a right angle, a very rapid clonus could be obtained. By using more force a clonus could be produced in the right ankle. The plantar, knee, and abdominal reflexes were exaggerated on both sides, but most decidedly on the left. The depression on the right side of his skull was said to have been noticed immediately after birth, the delivery having been effected with the forceps with much difficulty. It had become less conspicuous as he had grown older. The depressed area of bone was finally removed. It was found to be very thin and vascular, and appeared to encroach but little on the cranial cavity. The dura and subjacent brain appeared healthy. The wound healed by primary union. Since the operation, fits have occurred at longer intervals and are much slighter. He has gained power in the left arm and leg, and never suffers from headache, and has become mentally much brighter.

PÆDIATRICS.

OBSTETRICAL PARALYSIS IN THE NEWBORN.

Not a year passes but what several cases of paralysis, dating from birth, are brought before the various surgical clinics of the continent. Most of these cases are children suffering from paralysis of the upper extremities, and are the results of injuries sustained during difficult labors.

These paralyses, which are directly due to obstetrical proceedures, such as version, the use of forceps, traction on the limbs, etc., have been recognized by the profession for some time. Dr. Comby, of the *Société médicale des hopitaux*, has been recently engaged in investigating their origin and prognosis, and a report of his work is given in the *Revue Médicale*, March, 1891. The facial paralysis, he claims, is due to compression by the forceps; likewise, frequently, the paralysis of the lower extremities. Rarely are the latter caused by injury to the spinal column or the cord.

The paralysis of the upper extremities, called "radiculary paralysis" by Comby, is directly due to a stretching or compression of the brachial plexus, caused either by application of the forceps, version, or hooking the shoulders of the fœtus, by means of the operator's finger or by an instrument.

Erb has demonstrated that all these violences cause a lesion of the fifth and sixth cervical nerves; nearly always the paralyses occur in the same muscles: the deltoid, the sub-scapular, the biceps, and the coracobrachial. The radicular paralysis may, however, be complete and include all the muscles of the upper extremities.

The prognosis of such paralyses is always serious. Duchesne holds that unless active treatment is instituted very early, a hopeful prognosis cannot be entertained; and the child, which in other respects may be strong and healthy, will surely remain a cripple.

According to Duchesne, the treatment includes Faradisation—applications of the current being made two or three times a day, and continued for five or ten minutes—also the application of the continuous current; and finally these means may be augmented by massage, stimulating frictions with turpentine, and salt baths. Dr. Goffroy recommends strongly electrization by means of the galvanic current, not in a continuous current, but interrupted. For the ultimate success of the case, it is, of course, of utmost necessity that the treat-

ment should be instituted as early as possible, and most carefully regulated.

A CASE OF TRISMUS NEONATORUM TREATED WITH SULPHONAL.

Dr. Julius Berenyi (*Pester mediz.-chirurg. Presse*, No. 7, 1891; *Therapeut. Monatsh.*, March, 1891) reports the case of a child, eight days old, who had tetanus on the fifth day after birth. On examination he found the internal organs normal, the pulse 148, the respirations 50 and quiet. The paroxysms were initiated by crying fits and great restlessness. The skin assumed a bluish color, and around the root of the nose the integument was thrown into thick folds. The nostrils became distended, the buccinators were rigid, the mouth was slightly opened, but would not admit the tip of the little finger. The abdominal wall was hard and tense, the upper extremities were crossed in a flexed position over the chest, the thumbs were spasmodically flexed inward, the vertebral column was perfectly rigid. From nine o'clock in the morning to two o'clock in the afternoon the little patient had five attacks, of which the fourth lasted an hour. Berenyi administered twenty centigrammes (3 grains) of sulphonal in an enema, and also gave the drug by the mouth. After the fifth attack, which was less intense than the others, the child began to take the breast. On the same day three attacks of diminished severity occurred. On the following day the paroxysms became less frequent and intense, and on the sixth day of treatment had disappeared completely. Altogether, ten grammes of sulphonal were employed, without the occurrence of somnolence or disagreeable after-effects.

HYGIENE.

ON THE RELATION OF ATMOSPHERIC ELECTRICITY, MAGNETIC STORMS, AND WEATHER ELEMENTS TO A CASE OF TRAUMATIC NEURALGIA.

R. Catlin, U. S. Army, writes in the *Medical News*: In the relationship of atmospheric electricity to pain, it is shown that by a comparison of 120 daily curves taken on neuralgia periods with the mean of the same number for *ten consecutive days* of each month, pain seeks identity with both lower positive curves and with the negative, and with fluctuations of great amplitude.

For the influence of May storms on pain the maximum auroral period of 1882–83 was selected; of this period, seven of the greatest magnetic storms were chosen. Accompanying each was pain, and in the majority of cases pain of unusual intensity prevailed. The great storm of November, 1882, the greatest of which we have a record, shows the relationship to be unequivocal. In the other cases the magnetic storm was coincident with other causes, which may or may not have had something to do with pain, but in four cases no dry or wet cyclone was in any way connected with the trouble.

The comparison of the weather elements —such as pressure, temperature, force of wind, humidity, relative and absolute, days of rain, depth of rain, hours of sunshine, number of storms, and ozone—with pain—covers a period in no case of less than five years. Of these the increasing temperature curve, the hours of sunshine curve, and the absolute vapor curve, operate to diminish pain, while all the others are identified more or less with pain. In the monthly products for fourteen years it appears that the "depth of rain," ozone, and "number of days of rain," in this order, but almost equally, constituted the best standards for pain measurement. By generalizing on the extremes through all these years, by taking the twelve months of greatest pain and the twelve of least pain, the above conclusions are verified, and the law stated in general terms, as follows:

Maximum pain bears a direct proportion to storm frequency, and an inverse proportion to temperature and elastic force of vapor; and minimum pain bears an inverse proportion to storm frequency, and a direct to temperature and elastic force of vapor; while depth of rain accompanies the number of storms and maximum pain. Charts of *relative storm frequency* and *geographical pain* charts are thus related.

What are known as "*spells*," or "*types*," of weather, lasting from one to three weeks, probably due to the relative position of the great anti-cyclone areas, having their influence on pain condition. This fact was recognized early in the history of this case, in 1869. Increased amount and intensity of pain accompany these "spells," particularly at their beginnings. Covering a period of fifteen years the *relative ratios of the monthly products of pain* were as follows: February, 176; March, 175; January, 174; December, 168; November, 164; April, 161; May, 160; July, 159; June, 154; September, 153; and October, 153. The ratios were determined by dividing the total number of hours of neuralgia of each month by the

total number of hours in the month for the whole period of fifteen years.

Perhaps the most difficult and complex part of the problem is in offering an explanation of the diurnal fluctuations of pain.

The record of hourly beginnings of pain covers a period of more than eighteen years; and the curve of the record of hourly beginnings of storms and the amount of rain of each covers a period of sixteen years.

The daily pain curve exhibits 3 pain maxima; the first at 11 A. M., the second at 2 P. M., and the third at 7 P. M. The part of the curve at 6, 7, and 8 A. M. has almost an inverse counterpart in 8, 9, and 10 P. M., but in the curve from 9 A. M. to 7 P. M., there is a very important minimum at 12 M. and 1 P. M., then a subordinate minimum at 3 P. M., very like that at 10 A. M., followed at 5 and 6 P. M. by a distinct minimum.

By placing on the pain curve the storm curves for the sixteen-year period, it becomes manifest that while the absolute values of the rain depths and number of storms on the pain curve do not show a full correspondence, it is, however, clear at once that there is a relative value between the two and the pain.

In all the discussions of this subject to this time, only instrumental records, such as synoptic charts, thermograms, etc., have been brought into use, but it is clear that the physical effects produced by the temperature on the southeast side of a cyclone is very different from the same record-temperature on the west or the northwest side.

It is found that the eastern edge of the neuralgic cresent lies more than six hundred miles, or about twenty-three hours to the east of the centre of the "lows," but no two cyclones or rain conditions are exactly alike, and have different kinds of rain, and when we consider that there are two atmospheres—one of a dry, gaseous air, and another one distinct, of aqueous vapor, with the latter never thoroughly intermixed with the former, and never in a state of equilibrium—we partially realize how impossible it is in any given storm to get a complete record by instruments, or of those which are the best pain-producers, for without apparent instrumental cause they vary much in this respect.

No local hygrometric reading can give anything more than a vague approximation of the quantity of vapor or its mixture in a vertical column of air.

A typical neuralgic atmosphere, anticipating a cyclone, may be a dry air with a diminishing light, variable wind, and a pale, delicate, bluish whiteness in the atmosphere, more marked toward the horizon, and in the first stage more marked in the western horizon. The sickly whiteness may increase for from twenty to sixty hours, with an increasing discomfort when exposed to the peculiarly penetrating power of the sun's rays, but during all this typical condition there is nothing which has measured the changing aspect of the air, nor its changing condition of heat permeability, nor the absolute vapor, except at the surface, nor the distinctive character of the cyclone heat in the southeast quadrant, nor the direction of the upper and cross currents of wind, nor, above all, the modifications of the diurnal and "semi-diurnal" effect superimposed on the cyclone movement. It therefore seems important, in studying the hourly phases of pain, that meteorological charts should be supplemented by a descriptive narration to complete the record, and a closer study of the effect of diurnal change on weather.

HYGIENE IN FRANCE.

Recently the French Chamber of Deputies have considered a general law governing workers in factories, child labor, etc. M. de Mun proposed an amendment providing that women should not be allowed to work the first four weeks after confinement. The proposition created a lively discussion, the general tenor of which was to the effect that the private life of citizens should not be interfered with to the extent proposed, and that the fixing of an arbitrary limit of four weeks was not wise, as many would be able to be at work long before that time, while others would be incapacitated far beyond the limit. One member proposed that compensation by the State be given to the extent of one franc per day. The amendment was finally tabled by a decisive vote.—*Le Bulletin Médicale.*

MEDICAL CHEMISTRY

PRESERVATION OF HYDROGEN PEROXIDE.

For this purpose, Kingzett recommends the addition of a small amount of ether. Experiments conducted by the author show that pure hydrogen peroxide lost, in twenty-eight days, ten per cent.; in ninety-eight days, 27.4 per cent.; in two hundred days, thirty-nine per cent.; and in four hundred and ninety days, 89.2 per cent. The addition of sulphuric acid reduced these figures to 9, 23, 27½, and 68.3, respectively.

Alcohol reduced them to 1, 7, 4, 7.4, and 22.8, respectively, while ether still further reduced them, showing a loss of the peroxide in the times mentioned of 0, 1.3, 2.4, and 15.9, respectively.—*Med. Rec.*

NEW REACTION OF HYDROCHLORATE OF COCAINE.

M. Schell, student of pharmacy at Mulhouse, states, in the *Journal de Pharmacie d'Alsace Lorraine*, that if a minute quantity of a mixture of calomel and hydrochlorate of cocaine be moistened with distilled water a deep grayish coloration at once takes place. Care must be taken to avoid too great a quantity of water. No other alkaloidal salt gives this reaction, though if free atropine be heated with calomel and water to about 212°F. a black or blackish coloration ensues. The same result is obtained when a mixture of calomel and atropine is treated with very dilute alcohol. It is rather remarkable that cocaine (the base) in the one case, and the salts of atropine in the other, do not yield the results above mentioned.—*Nat. Druggist.*

TO DETECT COPPER COLORING MATTER IN TEA.

Sometimes worthless and exhausted tea-leaves are restored to their natural color and made to look like a superior article of green tea by coloring with copper or drying on copper plates. The addition of a little aqua ammoniæ to an infusion of tea thus colored will at once produce a blue color, more or less intense, according to the amount of copper present. The presence of copper coloring matter in pickles, preserved vegetables, etc., may be similarly detected.—*Nat. Drug.*

THE ALKALINITY OF THE BLOOD WHEN CONCENTRATED BY THE ACTION OF LARGE DOSES OF SODIC SULPHATE.

J. Swiatecki (Hoppe-Seyler's *Zeitschr. f. physiol. Chem.*, November, 1890) discusses this question. In 1850, C. Schmidt made the observation that in the algid stage of cholera the blood loses its alkalinity so markedly that in many instances it may even redden blue litmus paper—an observation that has often since been confirmed, as, for example, by the French Commission during the cholera in Egypt in 1883. Mya and Tassinari, who have investigated the different diseased processes which affect the alkalinity of the blood, have also studied its behavior under the influence of certain purgatives, such as infusion of senna, magnesia, and sodic sulphate, but without obtaining any positive results. The author accordingly pursued in the University of Warsaw a series of researches upon dogs with Glauber's salts, and as the result of them he concludes that the alkalinity of the blood increases when its specific gravity is raised by means of large doses of these salts; that this rise can be explained by the increased transudation of acids, as well as alkalies, from the blood into the intestine in accordance with the laws of osmose; and that the attempt to explain the increased alkalinity after the use of mineral waters exclusively through the passage of basic salts out of the intestine into the blood is not satisfactory.

NEWS AND MISCELLANY.

TUBERCLE BACILLI AT THE POINT OF INFECTION.

By inoculation on guinea-pigs and rabbits, Tangl has established (*Monatsh f. prakt. Derm.*, No. 4, February, 1891) the fact that tubercle bacilli cannot penetrate the body without producing tuberculous changes at the point of entry. He infers, therefore, that in primary tuberculosis of the lymphatic glands, or of the bones, if after even a considerable time there is no tuberculous change externally, the tuberculosis could not have been produced by external infection.—*Brit. Med. Jour.*

IMPORTANT IMPROVEMENT IN MICROSCOPIC LENSES.

It is stated that an immense improvement has recently been effected in the manufacture of glass for optical instruments by means of the addition to the ordinary materials of phosphorus and chlorine, which in some as yet unexplained way cause the glass to be very much more transparent, and enable it to receive a much higher degree of polish than any optical glass hitherto manufactured. Thus microscopes can be made which will render objects of the diameter of only the one-eighth millionth of a millimeter visible, whereas with the best instruments now in use the diameter of the smallest object that can be seen is one-sixteenth thousandth of a millimeter.

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Clinical Lecture.

THE ETIOLOGY AND THERAPY OF WEAK LABOR IN PRIMAPARÆ OF ADVANCED AGE.

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Gentlemen:—The subject of to-day's lecture, namely, the Etiology and Therapy of Weak Labor in Elderly Primaparæ, is one that is but very meagerly dealt with in the text-books. Only a few monographs of very recent date show that this subject has received any attention or study at the hands of specialists.

During the last summer, cases have been brought to this clinic, that have forced upon us the study of labor and confinement in primaparæ of advanced age, and it is high time that we should have a thorough understanding of the subject. Before going into the special subject under consideration, let me call to your mind the characteristic peculiarities, acknowledged by other observers, to be found in the confinement of elderly primaparæ. The majority of authors agree on many points, and a résumé of their opinions is, therefore, not difficult.

It is of primary importance to fix the dividing line between what may be justly termed young or old primaparæ. Ahlfeld places this age at thirty-two years, being—as he expresses it—the middle of the "ovulation-period" (15–50 years). Hecker is of the opinion that fifty years of age does not constitute the average age for "change of life" but is too old, and I agree with him. He, as well as Cohenstein, Rumpe, Steinmann, and other writers, take the age of thirty as the dividing line. Glancing at the tabulated records of various observers, we find that Cohnstein reports his observations at the parturition of 393 old primaparæ, Ahlfeld, 102, Hecker, 422, Rumpe, 100, Steinmann, 645, and it is from the results of these observations that we will form our résumé.

It will be of interest to you to know that Cohnstein reports the cases of women becoming primaparæ at the advanced age of fifty years; while the oldest primaparæ on record is one reported by Steinmann, the patient's age being fifty-two. The recorded observations, however, show that child-birth rarely occurs, for the first time, in women over forty years of age. The influences of a late appearance of menstruation upon late conception, the course of pregnancy, and peculiarities in parturition, in the sex of the fœtus, and in the lying-in period, are questions which are answered similarly by the majority of observers. The following table, compiled by Hecker, showing the age of the appearance of the menses in a number of primaparæ, speaks for itself:

In 39	cases	menstruation	began	at 20.
" 14	"	"	"	" 21.
" 13	"	"	"	" 22.
" 3	"	"	"	" 23.
" 4	"	"	"	" 24.
" 3	"	"	"	" 25.
" 1	"	"	"	" 26.

Late sexual development is, therefore, according to Hecker, the principal factor of late parturition.

Regarding the causes of delayed conception, Rumpe, while agreeing with Hecker in the importance of retarded sexual development, recognizes also three other possible causes. First, and very naturally, delayed cohabitation, until a late period of life; second, a hindrance to conception by some local disease, for which a suitable treatment should be instituted; third, a hindrance to conception caused by some unrecognized trouble or ailment, which, after years of cohabitation, yields voluntarily to conception. Such local anomalies have been reported by Cohnstein, and include rigidity of the vagina and of the vaginal entrance, rigidity of the *orificium externum*, closure of the external orifice resulting from long continued catarrh, and fibroids or sarcoma

of the uterus. He concludes, that pathological changes in the vaginal orifice, the vagina, or the external os, which prevent, or render difficult the accomplishment of coitus, or render the introduction of the seminal fluid into the uterus difficult, are among the most frequent causes of sterility. For a time also, it was erroneously held that a narrow pelvis should be considered one of the etiological causes of late conception. This, however, is totally unwarrantable. Regarding the peculiarities following the course of pregnancy in old primaparæ, Winckel has called attention to their predisposition to kidney troubles.

The researches of Deventer, Dionis, v. Siebold, Wigand and Michaelis, show that the rigidity of the sexual organs in old primaparæ, cause increased difficulty in childbirth, and result frequently in lacerations of the perinenum. E. v. Siebold has observed repeatedly delayed and painful labor, and considerable trouble in passing the afterbirth, owing to the weakness of the uterine contractions. Mauriceau speaks of difficulties occurring from the position of the os coccygis, and Neubeck, of the unyieldingness of the pelvic cartilages generally. The text book of Naegele-Grenser speaks of the inclination of old primaparæ to eclamptic convulsions. Valenta's experiences have shown him that in these cases a change of the fœtal condition very frequently occurs during the last month of pregnancy, causing a premature rupture of the bag of waters. This, he asserts, occurs with great frequency in primaparæ between the ages of thirty-six and forty years. Hecker calls attention to the frequency of extra-uterine pregnancy.

In connection with this brief historical résumé, it will be well to go a little deeper into the subject. The principal characteristic, acknowledged by the authors mentioned in the first part of this lecture, is the *weakness of labor* in old primaparæ. This weakness and tardiness of the contractions, may proceed throughout the entire course of labor, or else may show itself as a secondary symptom, the initiatory labor having been normal.

Curiously enough, this weakness of labor is accompanied by an utter disproportionate amount of pain, this being frequently of an agonizing nature. These convulsive pains occur most severely in cases when there has been a premature flow of the amniotic fluid, the os remaining hard and unyielding.

Rigidity of the soft parts in general is another factor, acknowledged by nearly all observers. Rigidity of the cervix tends to give trouble, and lacerations of the cervix occur frequently.

I have already spoken of the frequency of a premature rupture of the amniotic sac. Cohnstein observed this in over eleven per cent. of his cases.

All these unnatural conditions very naturally tend to produce a tedious course of labor for old primaparæ, and this may be regarded as an almost inflexible rule. This tediousness is especially marked during the "dilatory stage," while the "expulsion stage," is generally hastened by instrumental interference. Finally, also, the "afterbirth stage" is generally delayed; Rumpe's cases showing that tediousness in this stage of parturition occurs in 10 per cent. of primaparæ.

Bidder claims that the average duration of labor in primaparæ is 17.8 hours, while Ahlfeld holds thta 20.8 hours is a just average. Beumer and Peiper have found that the average duration of labor in old primaparæ is 25 hours, and Ahlfeld claims that it is 27.6 hours. Regarding the use of instruments, the general opinion is that, in old primaparæ, forceps will be used five times as frequently as in general cases. Operative interference for the removal of the afterbirth is also frequently necessitated; Cohnstein reports 26 cases in which he was compelled to use instruments in the removal of an adherent placenta, and Hecker reports 15 similar cases.

Another point, on which all writers on this subject seem to agree, is the frequent occurrence of puerperal eclampsia. Another frequent complication is post-partum hæmorrhage, caused either by atony of the uterus, adherent or retained placenta.

I have thus briefly given you the chief characteristics acknowledged to be of frequent occurrence in old primaparæ, but before leaving this chapter of peculiarities, must not fail to call your attention to one more, and one which, if met with, is likely to cause grave fears on the part of the obstetrician. When we have indications for the use of the forceps in these cases, we not only find a weak fœtal pulse, but very frequently also an abnormal weakness, and exhaustion of the patient. In two cases reported by Rumpe, death, which occurred during labor, could only be attributed to exhaustion. One of these cases was that of a primapara, age 35, who died after 60 hours of weak labor, and the other who died after 24 hours of labor, her age being 43 years. On the other hand, Ahlfeld reports 9 cases in which the patients evinced great excite-

ment, which gradually increased to a violent delirium. This, Ahlfeld claims, is due to an abnormal excitability of the nervous system, caused by the long and painful labor. I hold it to be of great importance to watch most carefully for these signs of nervous depression or excitability.

The number of still-born infants is, on an average, far greater in old primaparæ than in other parturitants. This is frequently caused by asphyxia of the fœtus, and this in turn, due to the tedious birth.

An interesting fact is that the number of male infants born by old primaparæ, far out-numbers the number of female infants. Finally, complications, and even death, during the lying-in period, are more frequently met with in old primaparæ than in others.

While experience has taught us the existence of these various complications, yet our scientific knowledge is still unable to definitely give the etiology of these symptoms, but in my opinion, these questions can still be answered by means of the results of extended personal experiences. The history of a case which I intend calling your attention to to-day, is calculated to throw light upon, at least, one of these questions viz., the significance of the different grades of modified labor in old primaparæ and its possible significance.

The history of the case is briefly as follows: The patient, Mrs. H., was a primapara, 35 years old, and of healthy parentage. Her family history is good. The patient herself, was a healthy child, and menstruated at the age of 12 years. During her married life she was always strong, healthy, and a good walker. Three years previously she had a slight increase of menstruation, and between the periods, she passed a slimy secretion from the vagina. Upon examination, I found a slight papillary erosion around the external orifice, and a slight hypertrophy of the anterior lip, which occasioned some contraction of the vaginal orifice. The hypertrophy was excised, the erosion subjected to the usual treatment and the patient soon recovered completely.

After her recovery, the patient shortly became pregnant for the first time during her married life. Pregnancy proceeded normally, and on December 24, the first fœtal movements were felt. At the end of March, I took the measurement of the pelvis and found it normal. In the middle of April the fœtal head was in the lower pelvis. According to my calculations the birth should have taken place about the first of May, but on the twenty-fifth of April, uterine contractions were felt, and the bag of waters broke. The fœtal head was well down in the pelvis, in the second occipital position. The fœtal heart was distinctly audible on the right side. The pains gradually increased, and were, to all appearance, normal.

During the entire day following (April 26), light labor continued, without producing any effect upon the position of the fœtus or dilating the cervix. The patient is up and about. April 27, the fœtal head still lower, but the cervix only dilated to the size of a finger. April 28, the condition unchanged, except that the contractions are becoming more and more painful, and a "sawing" pain appeared in the small of the back. At night no rest can be obtained, and the patient's appetite, which, until now, has been excellent, begins to fail.

April 29, no change.

April 30, great weakness in consequence of loss of sleep and appetite. The painfulness and also the inutility of the pains, which are growing shorter, continues. The only change is a slight swelling of the os. The patient is greatly discouraged.

Up to this time the treatment consisted in the application of active measures, calculated to increase the severity of the uterine contractions, and for this purpose two baths were given daily, tepid vaginal douches used three times a day, four litres being used at each douche, with the addition of a little carbolic acid. Also as much exercise as possible, such as walking about the room, etc. All this supplemented by a nutritious diet, wine and brandy. The intensity of the suffering was relieved somewhat with antipyrine, and suppositories containing laudanum.

As no advance was being made, and as the situation seemed a most hopeless one, I attempted a slight dilatation of the os, although it was evident that the cause of the trouble did not lie in this direction. The os was soft and smooth, and normal contractions would have caused speedy dilation.

On the first of May, after five days of labor, the patient had an attack of delirium. She threw herself wildly about on the bed, rolled up her eyes, and called out unintelligibly, as if in the greatest fear. I was at once called, and found the patient somewhat quieter, but otherwise about in the same condition. I now made several incisions in the os, without, it must be confessed, expecting much from them. In the evening of the same day it was seen that the procedure had been ineffectual. Practically, the local

condition showed that the patient was still in the first stage of labor, while her dangerous weakness and exhaustion were most alarming and the altered frequency of the fœtal heart sounds, showed that the situation was a most critical one. Calling in a colligue, we agreed that the immediate extraction of the fœtus was necessary to the mother's life, and, accordingly, perforation, with Levret's shears, and extraction was speedily performed. The pains did not even prove sufficient to expel the after-birth, although energetic massage was performed for about an hour, and finally this had to be removed manually. The fœtus was that of a large child, weighing 3,500 grammes, and of normal development. Post-partum hæmorrhage did not occur, and the patient subsequently recovered after a normal lying-in period.

The peculiarities characteristic to old primaparæ, as observed in this case, included, first, abnormal lack of energy and effectiveness of the pains, which, although they recurred at regular intervals, only dilated the os to the size of about a nickle; second, that in the face of an apparently normal physical condition, a so heroic method of delivery was necessitated.

In this case, no existing physical abnormalities justified the weakness of the labor, and the only etiology which could be advanced was the patient's age. The physical strength does not seem to have anything to do with it. Indeed statistics show that in old prima-paræ of vigorous constitution the labor is apt to be weaker than in constitutionally delicate patients of the same age. The question of etiology is, therefore, a most difficult one to answer, but one which I sum up in the following sentence:

The mechanism of parturition—if I may use this expression—loses its power of exact work with the increased age of the patient. This loss of power is caused principally by inaction, due to long sterility, and increases with the age of the patient.

Regarding the treatment of these cases, no definite rule can be laid down. Everything depending upon the severity of the case. If symptoms of extreme exhaustion or excitability are present, the mother's life is in great danger, and the fœtus should be at once mechanically removed. Until then it should, very naturally, be the aim of the physician to save both lives if possible. It should, however, always be endeavored to save the mother from danger, and any operative procedures which would imperil her life for the sake of the child's, are not to be entertained.

Incisions into the os may, or may not, be effective. More heroic measures have been offered, such as Dührssen's method of cutting deeply into the external orifice until the vaginal wall is reached, in order to render the application of forceps possible. Such procedures, even if undertaken with every precaution, including strict asepsis, cannot be regarded as anything but dangerous, yet the operation has proved successful in experienced hands. Tamponing the cervix and vagina with iodoform gauze is another rational method often valuable in strengthening the pains and dilating the os.

Regarding the operation of Cæsarian section, in my opinion, the risk run by this operation, although it has reached so high a grade of perfection, is too great to warrant it, when by sacrificing the child's life, an extraction per vaginam can be easily effected. Still, the operation is one for every operator to consider in such cases.

Experience is, after all, the best teacher in these cases, and at the same time the hardest teacher, and in this lecture I can only hope to have forewarned you, so that you may not be dismayed when meeting a case of the kind.

CARDIAC HYPERTROPHY AND DILATATION—BRONCHITIS—RETRO-PERITONEAL SARCOMA—ENLARGED GALL BLADDER.

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CARDIAC HYPERTROPHY AND DILATATION.

Gentlemen:—You have here a man 22 years of age, a laborer by occupation, who was apparently in good physical health until about one month ago. At that time he was taken sick, complained of a good deal of pain about the right shoulder joint, with frontal headache, cough with expectoration and vomiting, and great physical depression. After suffering with these symptoms for a day or so, he was compelled to take to his bed, and remained there for a couple of weeks. At the end of this period he got up again, the pains in his head disappeared, his strength gradually returned, and he felt in a position to be able to go back to work again. He remained at his work this time for about four days when he suddenly, and without any appreciable cause, began to experience great

shortness of breath and palpitation, and these symptoms persisted up to the time of his coming to this clinic for the first time, which was five days ago.

Physical examination of this man then showed a condition of the heart the same as he at present has. He had then some râles over both lungs, giving us the physical signs of a general bronchitis, and he had a pulse of 140. He was advised to go home, remain perfectly quiet, and was put on the use of iodide of soda. We find him now not looking particularly bad, and he feels well enough to go back to his work, although he still has dyspnœa. The bronchitis has apparently disappeared and there are no physical signs of anything wrong with the lungs at the present time.

When we examine this man's heart we find it considerably hypertrophied and dilated, but without any murmer, and one, though laboring under excitement that is quite marked, still, when he is quiet, acts fairly well. We find a pulse showing no evidence of increased arterial tension.

This is all the clinical knowledge we can obtain in this man's case, and though it is easy enough to give the cause of his illness a month ago, which was due to the prevailing epidemic, it is not now so easy to say why he has a heart that illustrates one of the examples of hypertrophy and dilatation, without valvular lesion, developing suddenly. Why such a pathological condition should develop in this case we do not know, but we do know that this young man, in ordinary physical health, began to complain of an abnormal cardiac sensation, with dyspnœa, and presenting all the physical characteristics of a heart hypertrophied and dilated, in the course of a day or so. Patients who develop in this way this form of cardiac hypertrophy and dilatation have a very extreme and distressing dyspnœa, and in many cases the heart's action cannot be brought under control.

There can be no question as to the propriety of keeping this man absolutely quiet until his heart's action is a little better than it is at present. Though he feels physically better than he has been, he still should not be permitted to go to work for the present. He should still continue the use of the iodide of soda, as he has been apparently improving under its administration, but should he not keep on improving, it would then be a question for us to determine whether he would not do better under the administration of the chloride of barium or aconite. The iodides, chloride of barium, and aconite, are the three drugs I would especially recommend for his use. This condition is not, by any means, a common one, and is an extremely interesting one of its sort.

BRONCHITIS.

The next patient is a boy, 16 years of age, who was brought to us from the country. He was in apparently good health until within the past seven months. During this period, however, he has complained of very little in particular, but his mother notices he has been steadily losing flesh and strength. He has had some cough, and a headache. He has now a temperature of 101° F.

On physical examination of this boy's lungs, I am able to detect the signs of bronchitis of the larger tubes, and he has, at the apex of the left lung, as compared with the right, resonance of a higher pitch and shorter duration, which pathologically denotes thickening of the pleura and consolidation of the lung on that side. Over the lower part of the right lung behind, I find a localized area of subcrepitant râles, without any marked change in the percussion note, which would mean either a localized pleurisy or inflammation of the lung substance at that point.

This is all the history we have of this case and these are all the physical signs that we can obtain, but they are not of sufficient clinical significance to warrant us in giving more than a probable diagnosis. I should be quite unwilling to say positively what is the nature of this boy's trouble, but from the absence of any marked symptoms and from this steady wasting away, I should be inclined to regard it as tubercular in origin. We have not as yet had an opportunity to examine microscopically this boy's sputa to determine the presence or absence of bacilli.

I should be inclined to put this boy on the use of cod liver oil and creosote, if he is able to bear it, and note its effect on his physical condition.

RETRO-PERITONEAL SARCOMA.

The next patient I present to you, is a man 70 years of age, who tells us that he was in his ordinary health up to three months ago, at which time his bowels became constipated, and this constipation has persisted up to the present time without any amelioration in its character. The form of constipation he has is that the bowels moved every two or three days, and then they had to be moved by the use of purgatives. He then passed hard fecal matter and he gives us no history of an inter-current diarrhœa, nor is

there a history of the passage of fecal matter diminished in size.

Besides this symptom of constipation this man complains of, he has been evidently losing flesh and strength, and has lost ten pounds in weight, he tells us, since the commencement of his present illness. His appetite has, however, continued good, and he has had no gastric symptoms until within the past few days, when nausea suddenly presented itself. He has also had, of late, a slight œdema of the feet, but more marked on one side than on the other. His urine has a specific gravity of 1,007, but contains no albumen.

Now, as we look at this man, we can at once notice his loss of flesh and strength. We notice also, as he lies on the table, an unnatural fulness about the centre of the abdomen, and we also observe that there is increased peristalsis, with a marked depression below the ribs laterally. I find on palpation a solid mass at about the middle of the abdomen, which is apparently as large as an orange, and hardly movable with my fingers. At the lower portion of the abdomen, and in the vicinity of the left groin is another but smaller mass which appears to have some movement on palpation. You can notice very distinctly the outlines of the larger mass in the abdomen change with the movement of the diaphragm.

Looking at this large mass in that way, it would seem that it was made up of a number of coils of intestine which are more or less matted together, and it would further seem as if these coils of intestine are more or less in motion all the time, changing their position continually from side to side.

With this history of this man's case, and the pathological condition of his abdomen, at the present time, the question naturally suggests itself to our minds: What is the nature of this tumor? One gentleman calls it a carcinoma of the peritoneum. That diagnosis might be possible, but this tumor is not evidently attached to the anterior wall of the abdomen, nor does it seem to be attached to the omentum, nor to the intestines, and these are the ordinary positions of a neoplasm that originates in the peritoneum. It is not a movable tumor and is attached to the posterior wall of the abdomen. Tubercular infiltration of the glands, another gentleman states this trouble to be. That is not very probable in this case, for the man has no history of tuberculosis. There are such pathological conditions as tubercular infiltration of the glands of the mesentery, but this diagnosis would hardly apply to the case before us. Chronic intestinal obstruction of some kind, is the answer of another gentleman. That would account for the constipation this man complains of, and for the increased peristalsis, but in what way are we to account for the presence of this hard mass? If there is a fecal mass in the colon, that intestine usually is movable. It would be very proper, indeed, to think of incomplete obstruction of the colon to account for a large part of this man's trouble, but, as to the exact nature of that obstruction it would not be so easy to say. We might suppose that a new growth existed in the wall of the colon, and there are curious examples of chronic inflammations that obstruct the colon in one way or another. Some sort of obstruction of the colon unquestionably exists here, but still this is not a case of ordinary obstruction. He gives up the clinical evidence of obstruction of the colon, and he also gives us evidence of this solid tumor which is attached to the posterior abdominal wall.

A gentleman says that this tumor is a retro-peritoneal sarcoma. With this diagnosis I am inclined to agree, and this tumor is evidently of that character. This man has had, at some time, a peritonitis, and this peritonitis has matted together the intestines, offering in this way interference, to a certain extent, to the passage of fecal matter through the intestine.

The way to treat this case is evidently to try and keep this man's bowels as freely active as we can. He has no pain, the tumor is not of a large size, and I see no reason why he should not be able to get along very well for a considerable length of time, providing we can get his bowels to move regularly.

ENLARGED GALL BLADDER.

I will now relate to you the particulars of a case I saw in consultation a few days ago in the hope that it may prove of some practical interest to you. I was called to see in consultation, a young man, who gave me the following history. He was 35 years of age, and of somewhat intemperate habits of life. He sustained, while under the influence of liquor, a traumatism over the region of the liver. This injury did not at first trouble him in any way, but, in the course of a day or so, pain developed over the region of the liver, some fever set in, and the patient felt so very sick that he was compelled to take to his bed. He remained in bed for some time, the pain and fever continuing, and he began to waste gradually

away. After suffering in this way for some weeks, an enlargement was noticed over the liver, and this enlargement persisted up to the time I was called to see him. When I came to the bedside of the patient he was vomiting constantly, appeared to be very much emaciated, and had that peculiar expression suggestive of septic poisoning.

The attending physician thought of the possibility of abscess of the liver in his case, and on aspirating that organ drew out no pus. The most noticeable feature of the man, besides this change in his general condition, was the appearance of the liver. The upper border of that organ was a little higher than normal, while its lower border beginning at the left side, came down symmetrically and regularly into the abdominal cavity as low down as the umbilicus. The liver was not only enlarged downwards, but also forwards, so that the anterior abdominal wall was pushed up, presenting all the characteristic outlines of an enlarged liver.

The physician who was in attendance made a diagnosis of amyloid degeneration of the liver, but this seemed to me to be altogether out of the question. I thought that the man had either a suppurative process going on in the liver, or a rapid neoplasm of that organ, though the appearance of the man was strongly suggestive of suppuration. I was embarrassed from the fact that aspiration had been done and no pus withdrawn. I was furthermore embarrassed from the fact that the patient, when I was called to see him, was so sick that I did not deem it right to aspirate the second time, and obtain positive evidence of the existence of pus in the liver, for I thought that the doctor, in aspirating, had not penetrated the liver substance sufficiently deep. Whether he had one or more abscesses of the liver, or diffuse suppuration of that organ, a pathological condition that sometimes occurs, I was not certain.

This morning I received a note from his physician, stating that the man had died, that his liver had been examined, and no suppuration existed. The tumor was an enlarged gall bladder, and instead of enlarging after the manner of the normal gall bladder, which is pear-shaped in form, it spread out under the under surface of the liver, so as to form a symmetrical and continuous tumor with that organ, and this is what gave, on physical examination, the appearance of an enlarged liver. The gall bladder, on examination, was found distended with pus. This fact never entered into my mind on arriving at the question of diagnosis. There was no cause for this pathological condition, except the blow he received over the region of the liver.

COMMUNICATIONS.

RESECTION OF THE OPTIC NERVE.

BY L. WEBSTER FOX, M. D.

(SECOND PAPER.)

Shortly after my first paper made its appearance on the above subject, I again had the opportunity of putting to a test the efficacy of this operation. The immediate disappearing of all sympathetic symptoms, the freedom from pain, the rapid recovery, the saving of an eyeball, make me give the details of the following interesting case.

Mrs. Kate Guest, age 25, of Palmyra, N. J., at the age of three years, had her *left eye* punctured by a fork. The tine entering at the lower and inner quadrant, close to the corneo-scleral margin in the ciliary bodies. This accident was immediately followed by an attack of sympathic ophthalmia, in which the sympathizing eye—the right—became totally blind, the left passing through the attack none the worse; the vision remaining good until November of 1886, when the right eye became irritated and inflamed causing the left one to become the seat of sympathetic iritis. It is interesting to note that the eye which was originally the seat of injury now became the attacked eye, seventeen years after the primal wound; in other words, the right was now the starting point of the migratory ophthalmia and the fulmination taking place in the apparently healthy one. At this stage the patient came under my care at the Germantown Hospital. The diagnosis was simple, although the left eye did not present any untoward symptoms. The patient complained of a "mist before her eye." An examination revealed iritis, the iris having become attached to the anterior capsule of the lens; having *seclusio pupillae.*

The patient had very little or no pain during the fading away of the vision. It was a case of "slow iritis," where the vision was blurred and the patient did not realize her danger until too late.

I immediately performed an iridectomy on the nasal side of the left eye; first to prevent further progress of the iritis, and second, to give a better pupil for vision.

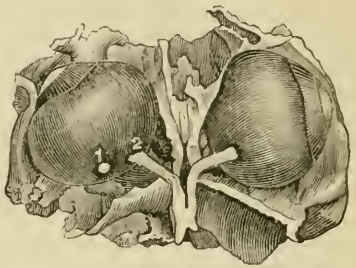
The internal treatment was hydrarg, bichlor. and potassa iodidi, pushed to their fullest limit. The eye rapidly grew better and useful vision was obtained. ($\frac{20}{20}$ J. $\frac{8}{6}$″) glasses did not improve sight, owing to a slight deposit of iritic pigment on the anterior capsule of the lens. The patient was married in 1887, and during her pregnancy, which followed shortly afterwards, she had a mild attack of dimness of sight, but attributed it to her physical condition.

In the latter part of 1889, the third attack came on, which materially lessened her definition of objects for distance. Having removed from the city, shortly after her marriage, she did not seek the professional advice of a medical man during the attacks, but depended solely upon such domestic remedies as hot water, tea leaves, etc., etc.

In February of this year she had a fourth attack, which caused vision to fall very rapidly to $\frac{5}{200}$, which so alarmed the patient that she sought my professional advice immediately. The attacks all seemed to start from the right eye, blind one, which was sensitive to pressure, with at all times some lachrymation, the tears being scalding and coming on in floods, at intervals; these symptoms always being the precursor of hazy vision in the left eye. At this examination I found in the right eye, which was partially atrophied, pain on slight pressure, but not at all angry looking. The left had a diffused Descemitis; iris musty and scarcely any reflex to be obtained through the artificial pupil which I made in 1886. Vision was very defective, fingers could be counted at about five feet against a black back-ground.

In 1886 I suggested the removal of the right eyeball, but owing to the young woman having hopes of a speedy marriage such advice was not entertained. The operation of resection of the optic nerve was suggested and when it was explained that the eyeball could be preserved, while the source of the migratory ophthalmia cut off, her consent to a resection was given and the operation was performed, under ether, March 15th, 1891. Vision began to clear on the second day following, and so continued from day to day until May 6th (last examination), when vision had returned to $\frac{20}{200}$. Very little or no discomfort followed the resection, in fact the patient returned home in ten days. At present the scar visible in the operated eye is nothing more than one would find after an advancement or tenotomy of a muscle.

I have recently been making experiments upon rabbits to decide whether the nerve should be severed immediately at its bulbar attachment or further down the trunk. My experiments prove that it is safer to cut the nerve as close to the eyeball as possible; by so doing one lessens the chances of a reunion. In the rabbit the optic nerve enters the eyeball at a right angle to its basilar end, which lies under the anterior lobe of the brain. As soon as the nerve is severed the ocular muscles turn the eyeball on its equatorial axis, and in consequence the nerve becomes displaced down and in, in some cases one-fourth of an inch.



The above figure represents a post-mortem drawing of an eyeball of a rabbit five weeks after a resection operation. 1, represents the optic nerve entrance turned out from its original position; 2, the optic nerve-end down and in, which was attached to the eyeball by organized tissue. The relative position of optic nerve entrance and nerve-end has been accurately preserved. The illustration is life-size. The fundus oculi was examined with the ophthalmoscope immediately after the resection. The arteries were found empty, while the veins retained sufficient blood to show their outlines very distinctly and so remained until the death of the rabbit five weeks later. In the rabbit the distribution of the blood-vessels is unlike that in the eye-ground of the human subject, while opaque nerve fibres extend beyond the equator in a narrow ribbon-shaped band, exceedingly bright and silvery, across the horizon. The eyeball did not change in appearance, the cornea remaining bright and clear; no change in the color of the iris nor crystalline lens. I am convinced that where the operation for resection of the optic nerve is carefully carried out, we have a better substitute than enucleation, and with proper instruments it becomes a very simple procedure.

I can only repeat what Dr. de Wecker has said, "that the only way to prove conclusively that resection of the optic nerve can take the place of enucleation is that a

large number of resections shall be made and the results noted."

The above case, which I have described carefully and somewhat at length, is one in which I feel sure a resection of the optic nerve is as safe a prophylactic measure as enucleation, and in addition I have saved a particularly morbid woman from the disagreeable necessity of wearing an artificial eye.

1304 Walnut St.

TYPHOID FEVER.[1]

BY DR. RIGG,

ALLEGHENY, PA.

Typhoid fever, gastric fever, typhus abdominalis, enteric fever and infantile remittent fever are a few of the terms used to designate a peculiar continued fever of long duration, usually attended with diarrhœa, and characterized by peculiar intestinal lesions, an eruption of small rose spots, and enlargement of the spleen. In common with other continued fevers, typhoid fever is due to the introduction from without of a specific poison into a system more or less predisposed to the disease.

The nature and origin of the poison, and the modes in which it is propagated, are questions of interest and importance. Two distinct views have been held with regard to the origin of the poison, one that it is specific in its nature, and derived only from some pre-existing case of the disease. The other, while usually produced in a person suffering from fever, it may also be generated anew by the decomposition of sewage and perhaps other forms of animal filth.

It is accepted on all hands that typhoid poison is reproduced in the system during the fever, and that its chief, if not exclusive outlet is the intestinal discharges.

There is no evidence that it is conveyed by the breath, perspiration or urine, but while it is in the intestinal discharges it is not as virulent when first avoided as after it has been allowed to stand awhile. Warmth, stagnation and seclusion from open air intensify the poison.

There is now very little opposition to the above theory—Murchison, of the older, and Harley, of the more recent writers, excepted. The former supporting the sewage gas origin, and the latter the effect of derangement of function, he denies the infectious nature of the disease, and holds that a chill or wetting is sufficient to determine congestion and the resulting phenomena of enteric fever. With the above exception, the mind of the profession seems to be almost a unit as to the specific cause of typhoid or enteric fever.

The mode through which the poison may find an entrance to the human body is still a question in the minds of many able investigators. As it stands to-day, we might say the probabilities are in favor of the following in the order in which they are named: *First*, Infected water. *Second*, Infected milk. *Third*, Infected ice. *Fourth*, Air being infected with the dried spores through dust. *Fifth*, Digital infection. *Sixth*, Infected meat. With reference to the first, or water source, there seems to be no limit to the evidence that might be collected were one disposed to spend the time and labor to collect it; we will therefore only refer to a few cases in which that seems to be the cause.

Mr. Charles V. Chapin reports on the epidemic fever in Providence, R. I., in its relation to the public water supply. It was found that the fever had prevailed at Natick, three and one-half miles above the pumping station which supplied the reservoir. It was learned that the excrement had been thrown on the river bank. The time between a heavy rain which would wash the excrement into the river and the outbreak was about fifteen to twenty days; deduct from this three days which would be required to get from river to consumers, and we have about twelve to seventeen days as the time of incubation.

This is in accord with the report given by Dr. Taylor in 1885, to the State Medical Society of the Plymouth epidemic, which was clearly traced to a case in the mountains on the bank of a stream that supplied the reservoirs.

The time which this got into the reservoir was, if I remember correctly, March 26th, and the outbreak April 9th to 15th, at which time it was in full force, also, in accord with a report by myself in 1884, to the Westmoreland County Medical Society, of an outbreak at Alice mines, in which one case was brought to a house where the closet was located just above a spring. About the third week there was a heavy rain, causing the vault to overflow, at which time I went to the superintendent and asked that the spring be closed up, when he informed me that it was the best water on the place and could not do it.

After trying to explain to him the reason,

[1] Read before the Allegheny County Medical Society, March 17th, 1891.

and failing, the matter was dropped, and in about seventeen days typhoid fever began to develop, we had in all twenty-four cases, all except one got their water supply from the above spring.

At this time the company ordered the spring closed, and the trouble ceased. Dr. Anderson reports a peculiar teat eruption in the milch-cow, in connection with an outbreak of enteric fever among the consumers of the milk, at Dundee. There is also a report from Leeds, showing milk to be the probable source of infection. I have been unable to find any well authenticated cases traceable to ice, but the fact that a low temperature does not destroy the germ, makes it a possible source of infection.

The air may be the source not so much by carrying the germs themselves, as by carrying the particles of dust, or other matter, that may contain the special poison.

It is impossible for a current of air to detach bacteria from moist surfaces, they must first dry. I think it possible to account for many isolated cases, that could not be accounted for in any other way.

As to digital and meat infection, they, in my judgment, are only possible and not likely means of communicating the disease.

As to diagnosis we will say but little, as the disease is too well known to you to justify taking your time, only a few points will then be noticed:

The invasion is usually insidious, more or less headache, muscular weakness, general depression, with pains more or less through the body, slight chills, as a rule not severe, loss of appetite, epistaxis, yellowish white coat on tongue, bowels confined or relaxed, if confined, usually open freely from slight purge, urine high colored and diminished in quantity, pulse and temperature above normal. The patient will have the appearance of more depression than will be accounted for by the temperature or duration of illness, the face is often a very useful guide in making an early diagnosis. One very important thing to do is to exclude any local inflammation as a cause of the pyrexia. The abdomen may be tumid with some tenderness of right iliac fossa, but the abscence of this does not exclude enteric fever. The gradual and continuous rise in temperature together with above symptoms and abscence of local inflammation, will leave us fairly sure of the character of the trouble. Then if we get a free yellowish green stool from slight purge, we may feel sure of our case, the rose spots will soon begin to make their appearance, a short cough is often present, sometimes severe with sibilant râles, If the pulse is much above one hundred per minute, you can look for a severe case,—if below eighty or ninety most likely a mild one.

Relapses are common in enteric fever; this if a true relapse is not simply a return of pyrexia, but a return of all the phenomena of fever. I have seen the third relapse with all the symptoms well marked, with a period of five to ten days between the ending of one and the beginning of the other.

As to the special symptoms and complications hæmorrhage is perhaps the first to attract our attention. This occurs in about eight per cent. of cases, usually after the fourteenth day.

Perforation also may occur, andis a very fatal complication.

Peritonitis without perforation may occur, and in typhoid fever may exist without any very great tenderness, but with a good deal of tympanites.

If great tympanites occur early in the disease, say the first week, it is an unfavorable indication. Diarrhœa is usually present though not often hard to control, and if not excessive not especially dangerous. The urine usually contains albumen in the early stage, and by some is looked on as a diagnostic sign. Ehrlich's urinary test is also regarded as of great diagnostic value. This is the characteristic red coloration of the urine, and is made by adding 25 parts of a solution of sulphanilic acid in dilute hydrochloride acid, 1 to 20 to 1 part of a 5 per cent. solution of sodium nitrite, and the whole mixed with an equal part of urine.

I have had no experience with this test and cannot speak of its usefulness. Pneumonia is very apt to develop in the later stage if the patient is exposed to any draft. It has been my rule for the past eight years to have the bed so placed that the door would open and shut without a draft passing over the bed. The windows should be just as carefully watched. It cost one man his life to teach me that lesson. Pulmonary gangrene, pleurisy, thrombosis and embolism may occur in the course of the fever or at its close. Parotitis going on to suppuration occurred once in my hands; there was no fistulous opening left after recovery.

Phlebitis has several times appeared as a sequela to enteric fever. Arteritis is also reported in which the femoral artery was occluded and amputation was necessary.

Sudden death may occur in typhoid fever from bulbar paralysis, capillary hemorrhage in brain, and from the much used and abused heart failure. There is nothing in the early

state of a typhoid patient to indicate that the fever will assume the abortive form; this, however, will most likely become manifest, by about the eighth or tenth day. The scope of this paper will not admit of the consideration of either the abortive or irregular forms of typhoid fever. In enteric fever the prognosis should be guarded on account of the long time the case will most likely run, and the risk to some of the complications; very high temperature or rapid pulse indicate a severe and possibly a dangerous type.

The treatment should be largely symptomatic. The patient should be placed in a large room, well lighted and well ventilated, any unnecessary articles of furniture should be removed. The body should be sponged off night and morning in tepid water; if the skin is hot and dry a little bicarbonate of sodium should be added to the water; if sweating is profuse a little vinegar. The patient should be handled with care, all traumatism to the abdomen should be dispensed with. Either violent or unnecessary palpation or food that is not in a liquid state. The great tendency of typhoid patients to develop tuberculosis should cause them to be protected from any possible exposure in that line. In the early state a few doses of the mild choride q. s. to empty the bowels and put them in an aseptic condition, will be good treatment; this may be given with naphthalin in three or four grain doses. Naphthalin is said by some to be more of a destroyer of the typhoid bacteria than calomel, but the latter would receive my confidence in the first few days. It lessens the subsequent diarrhœa and leaves the bowels in a better and more healthy condition. The statistics show that cases receiving the mild chloride at the onset of the disease run their course in about two days less time than those not receiving the same.

As to the antipyretic treatment, high temperature in any specific fever is an indication of danger, not the cause of it. Temperature is only a part of a specific fever. Sub-normal temperature is due like elevation of temperature to disorder of the thermotaxic centers. Perhaps the best antipyretic we have is the cold pack or the spray of cool water as practiced by Hiller and others in sun-stroke.

Antipyrine, antifebrin and phenacetine should not be used as antipyretics in typhoid fever. It has been my experience also, that large doses of quinine given throughout the disease had the effect of prolonging the disease, and I have failed to see any good in any way from its administration.

Carbolic acid and tincture of iodine, resorcine, turpentine, the acids, etc., have all been used with more or less success. The important thing in my mind is to keep the stomach in as good condition as possible, the bowels aseptic, patient quiet and well nourished with liquid food, and you will give your patient the best chance to get well. Complications must be treated as they arise.

Society Reports.

ALLEGHENY COUNTY MEDICAL SOCIETY, MEETING MARCH 17TH.

DR. RIGG READ A PAPER ON *Typhoid Fever.*

(See page 655.)

DR. KŒNIG: I am pleased to see the prominence that Dr. Rigg has given to infection through air. I believe that is a source of infection frequently overlooked by city physicians. The infection to which I refer is found only in cities in which there is a system of sewerage. I am perfectly clear in my mind that I have seen a number of cases of typhoid fever the infection of which could be traced to sewer pipes, in which there were no traps, that led directly from the underground sewers in which the intestinal discharges of typhoid fever cases are thrown throughout the year. We can readily understand that the germs will multiply there and that they will rise with the vapors, for if odors can rise from the sewers into sleeping apartments, certainly these minute germs to which I believe we all consider the disease to be due, can also rise, and I think it is the duty of all physicians to inspect the sewage of a house in which cases of fever have occurred, and to prevent any one sleeping in an apartment in which there is no trap to the waste pipe, and I believe, furthermore, that the air saturated with the germs of the disease which have deleterious influence on the course of the disease, and the removal of the patient from such a room would be judicious. I wish also to say a word in favor of the drug that Dr. Rigg has recommended, namely, napthalin. I have used it in a few instances, perhaps not sufficiently often to decide regarding its merits with absolute certainty. I have used it where there was considerable tympanitis, with uniform success. It is an extraordinary germicide, and in repeated doses of two or three grains will disinfect the intestinal canal. It seems to me rational treatment to administer a remedy like napthalin if for no

other reason than to destroy the fermentative germs in the intestinal tract.

Dr. Kearns: This subject is so old and trite that it is perhaps difficult to raise profound interest in it, but perhaps there is no subject that should engage our attention more thoroughly and more carefully than typhoid fever. When I commenced to practice, over thirty years ago, it was the great disease, requiring more attention than was given to the treatment of almost any other disease, but now it has lost that interest, owing partially to the fact that other ailments have grown to occupy a large share of the professional attention. I think Dr. Rigg's paper was a fine resume of practical points in which he dwelt principally on causation, diagnosis and prognosis. Of course it is unnecessary to go into the anatomical and clinical condition, neither is it necessary to dwell on causation. However, I am not prepared to admit that this is due exclusively to outside influences communicated by microbes. That it has no other source of generation I am not prepared to admit and never have been. I agree with some of the old authorities who studied this disease many years ago and saw it in its true type. I never come across a case now such as I came across twenty-five years ago. At that time whole families would be taken down, four and five one after the other. Now it is seldom that more than one in a family is afflicted with the disease at the same time. Then, these cases were invariably characterized by a peculiar tongue, and by symptoms of the locality of the disease, the ulceration of the glands. I admit that in all my experience and careful study of typhoid fever, it is a difficult matter at the present time to diagnose a case of typhoid, especially at the first time I visit it. I never report a case to the board of health until I have made two or three trips. Formerly, typhoid fever was supposed to come on slowly and gradually. The cases we have now come on abruptly, and I always defer my report until I am certain about the fever. I believe it is to a certain extent auto-genetic. I am borne out in this supposition by men who have studied the matter much more than I have. I believe that great mental worry and strain on a system partially prostrated will throw that patient into typhoid fever. I believe, therefore, that is not dependent upon germs. However, I believe that germs will come in and infect, as in the excretions from the sewers through the cess-pools, but I have no doubt that we can have typhoid fever come on auto-genetic. Having started out many years ago with a treatment which was successful, I have never changed it. I never use any of the recent remedies. I think the systematic, scientific treatment of typhoid fever is by preparations of acids. Quinine in small doses is required. The great remedy I have always relied upon is turpentine. Half a drachm every two or three hours. I have no confidence in the treatment that will reduce typhoid fever by reducing the the fever. I would be afraid to use cold douches. Strong stimulants are necessary to keep up the vitality.

Dr. Batten: I agree with the paper and of course I have no criticisms to make, but there are conditions in the treatment of typhoid fever that requires us to move very carefully. These conditions we do not meet in a mild case of fever. I have treated a mild case of typhoid fever in an old lady sixty years of age without any medication and she did excellently and recovered. About fifteen years ago I had a very malignant case of typhoid fever, pregnant about three months, and she ran on very badly until the third week, when miscarriage took place and she lost an immense amount of blood in the miscarriage. There was no decomposition in the fœtus. I had some trouble in getting the placenta delivered, but after it was delivered, and she had lost this blood, the whole type of the fever seemed to have changed, and she made a fine recovery. I do not mean to say that blood-letting in her case would have been the proper thing. Another case that came under my notice. Some of you will recollect that about twenty-five years ago morphia was recommended in cases of delirium to make the patient sleep. This case I saw had been under the care of a physician in Pittsburg, and the patient was delirious, and it had taken three men to hold him. He was taken to Passavant's hospital. It was about the time cold packs were introduced. I put him in a cold pack twenty minutes and afterward gave him a good dose of whisky. It lowered his temperature and changed his condition and he went to sleep and slept for eight or ten hours soundly, and the disease went on without difficulty to a good recovery. I should state that his temperature when he came into the hospital was about 104.

Dr. Lange: I was very much pleased with Dr. Rigg's paper and the society certainly is indebted to the doctor for the brief but comprehensive résumé presented. There was one point which struck me as being a

little incomplete, and which it is profitable to consider a little more in extenso than Dr. Rigg did and this is the occurrence of pneumonia which Dr. Rigg ascribed solely to changes of the temperature of the atmosphere in the sick-room. Now, there are two kinds of pneumonia occurring in typhoid fever, one of which is very fatal, and the other not so. The pneumonia which is not very fatal and which occurs in typhoid fever frequently is croupous pneumonia. I believe with Dr. Rigg that croupous pneumonia occurs frequently in typhoid fever from change of temperature of the atmosphere, and Dr. Rigg has with him, probably, the majority of the profession, in ignoring the pneumococus. The other form of pneumonia which is very fatal in typhoid fever is catarrhal pneumonia. It frequently is the direct result of the dirty mouths of patients and comes when the patient is late in the disease. It has been called for this reason deglutition and inhalation pneumonia and is a preventable complication. On the other hand croupous pneumonia comes about the second week. These catarrhal pneumonias are as a rule preventable, and it is the catarrhal pneumonias which make a large death rate in typhoid. It is difficult to keep the mouth clean. In a recent report from Germany where they use the cold bath so extensively, there were reported one hundred cases of typhoid fever without one death, no medicines being used, nothing but the cold bath and scrupulous cleanliness of the mouth. When I had typhoid fever, five or six years ago, I was treated to a cold bath with very bad result. It was followed by an aggravation of an already existing mild bronchitis and coryza. We must conclude that the Germans are a different race; they are more rugged and hearty than the people who live here. They are more rugged than the people we have to treat. You can see that in the emigrants; you can see their full habits and faces, their cheeks red with blood, and their lips scarlet.

Dr. Green: I wish to compliment Dr. Rigg on the paper. His treatment is almost parallel to that which I followed for a number of years with regards to the disinfecting of the intestinal canal. I wish to speak more especially about a remark offered by Kearns to the effect that the typhoid fever of the present day is not the typhoid fever of twenty years ago. I cannot conceive why it is not and I think we would be mistaken were we to conclude that the doctor is right. I think the typhoid fever of the present day is as severe as the disease ever was. Of course we have had epidemics of a mild type of typhoid, but that is no argument in favor of a different type of typhoid to what we formerly had. It is well proven that the typhoid germ exists in typhoid fever, and I think it is acknowledged at the present time and I have no doubt that the germ existed previous to the discovery a considerable length of time, and I think that what causes the apparent change in type of typhoid fever is the treatment at the present time. The sanitation and medication, I think is due to them.

Dr. Thomas: I expected to hear more said with regard to the prophylaxis of typhoid fever. I am in the habit of telling patients who have typhoid fever the fact that they have taken into their mouths something to cause the disease. I think the greatest thing we can do for typhoid fever is its prevention, and no one can use a greater influence in bringing about that condition than the medical profession. On the South Side we get it once in a while, and we get it under certain conditions just as sure as the sun rises. The circumstances are these: If the river remains low for a number of weeks and the water gets below the combs of the dams, we have stagnant water. In the pool from which we draw our water we have the sewerage of the entire South Side above the lock. What do these sewers carry? Fecal matter; they are constructed to carry fecal matter. In addition to that, we have all the sewage and refuse of Soho, from Minersville, from Hazelwood, and in addition to that, we get the sewage from Homestead, Braddock, and so on. As sure as we get these conditions, we have typhoid, and the epidemic generally comes on within three or four days. We will have to-day three or four patients with symptoms of fever, to-morrow four or five and the next day six or seven, it gets all over the town and that condition lasts until we get a big freshet to sweep out the pool. So far as the medical profession of the South Side is concerned, we have resolved, and have had the resolutions published in the prints of Pittsburg, that the entire cause of the epidemic is bad water. It is said that in Berlin at the present time typhoid is rare, simply because they have a good water supply. Before, it was very common. They tell me that in Johnstown, where the water is gotten from the mountains free from contamination by these germs, they do not know what a case of typhoid fever is, only through cases that come there from other

places. We might talk a good deal about typhoid fever; the proper thing is to stop the fever.

Dr. Stevenson: The paper was a very comprehensive, full and truthful statement of the knowledge of typhoid fever to-day. The discussion has covered a number of points embodied in the paper, but there are others, enough left untouched to keep this society talking a long time. I was a little surprised at the statement of Dr. Kearns that certain conditions of depression and nerve disturbances could produce typhoid fever. I presume the doctor would admit that a case of fever originating in that way would transmit the disease to other people. Now, how could nervous disturbance and mental strain originate a specific disease and transmit it to another person? I am unable to understand how to expect this. I think this much is true; that the conditions have a depressing effect and a patient in that way is more exposed to the germs and is more apt to contract the disease. Another of the speakers seemed to be at a little loss to explain the recovery that followed an exhaustive hæmorrhage occurring in an abortion in a pregnant woman with typhoid fever. I think the secret is that he had a patient who had a complication. He had a patient who was pregnant, undergoing typhoid fever. The patient lost the pregnancy, the hæmorrhage did not happen to kill her and she was in a better condition to get well. It has occurred to me that it is a little curious that both in the paper and in the discussion that has followed, there has not been a single word dropped as to typhoid fever in children. The profession are certainly well aware that typhoid occurs with great frequency in children. It is estimated by the best authorities that one in six of the total number of cases is in children. The diagnosis in children is probably the most important part of the matter. As a rule, typhoid fever in children is mild, but it has been very often mistaken for other diseases.

I do not know that the paper specifically mentions the condition of the tongue in typhoid, but I think this one of the most characteristic symptoms. A moist, heavily coated tongue, with a red area and a red tip. I am not aware that the condition comes in any other disease. In regard to the treatment of typhoid: Typhoid is a self-limiting disease, it has a certain course to run, and the only danger is some complication or some mismanagement that changes the type and character of the disease. Dr. Kearns thinks there is a great difference between the cases of typhoid which he saw earlier, and which we now see. I think the main difference is in the way they are managed. I saw a case in consultation not very long ago in which I found the patient unconscious, with the abdomen like a barrel, tongue dry, lips all cracked and covered with sores. I asked the doctor what he had been doing. Well, he had put the patient on half grain doses of calomel every four hours. "How long did you keep that up?" Five days. "Why did you stop?" The patient had had diarrhœa. "What did you do then?" The patient was put on sugar of lead and opium, grain and a half of sugar of lead, and half a grain of opium. This for four days. The patient's mouth, tongue and lips were all very dry. "What did you do then?" Put him on turpentine and have him on turpentine now. He is no better. I said, "Doctor, put this man on an ounce of whisky every hour and three pints of milk a day, and give him nothing else, he will get well." And he did. It looked to me as if that physician had been treating a disease he had produced. He gives calomel which causes diarrhœa; then he gives sugar of lead and opium to stop the complaint. Then he turns around to remove the effects of the sugar of lead and opium by the use of turpentine. I think there is very little danger in typhoid fever when the temperature is under 104. If the temperature does not exceed 104, it is well enough to let it alone. If it gets above that it is over the danger line. I think about all there is to it in typhoid is to see that the temperature does not get beyond this danger line, and to see that we do not lose our patient through some complication.

NEW YORK SOCIETIES.

NEW YORK ACADEMY OF MEDICINE.

Meeting of April 16, 1891.

The President, Dr. Alfred Loomis, in the Chair.

Is Embryotomy of the Living Fœtus Justifiable?—A paper by Dr. Egbert H. Grandin opened the discussion on this question. He thought that, in view of the great progress in abdominal surgery during the past decade, the time had come when the question of the justifiability of fœticide should receive earnest consideration. Ten years ago, when the mortality from the Cæsarean section was forty per cent on an average, embryotomy had been a beneficent necessity. To-day,

however, when sepsis had been practically banished as an after-complication of abdominal surgery, when we knew how to effectively suture the uterine wound so as to guard against gaping and internal hæmorrhage, when the fear of opening the peritoneal cavity had been proved groundless, the time was at hand when the physician had the right to question if, under all conditions, he was called upon to mutilate the living fœtus. On moral grounds the speaker would not discuss the question. Theologians could not decide the point for obstetricians. If the latter could once prove that the risk to the woman from the Cæsarean section was no greater than from embryotomy, their duty as well as their pleasure would be to save two lives instead of, as in the past, destroying the lesser. If our data concerning the Cæsarean section continued to improve over those of the present time, the choice of operation would lie purely with the physician and not at all with the laity, who would always claim precedence for embryotomy over the Cæsarean section. One important factor lacking toward the desired end was more thorough education of the student in pelvimetry. The Cæsarean section should be *elected*, even as an ovariotomy or a hysterectomy was. The operation should never be left as a *dernier ressort*. A difficult embryotomy subjected the woman to as great risks as the *elective* Cæsarern section. Shock was the element to be feared chiefly after both operations, and the speaker had witnessed greater shock after embryotomy than after the Cæsarean section. We must learn, further, not to rest our conclusions on the statistics at present at our disposal. These were very fallible, seeing that they included many instances where the section was not elected. The record of individual operators from the elective Cæsarean section gave a fair estimate of the results obtainable in the future. Thus, certain German operators had a mortality as low as six per cent. Hertsch had reported seven cases with no deaths; Cameron, ten cases with one death. At the New York Maternity Hospital the record for the past two years was four elective sections, all successful as regarded both the mothers and the children, while during the same period there had been four craniotomies with one death. The speaker trusted, therefore, that surgeons to maternity hospitals would with one accord cease doing embryotomy, and perform the Cæsarean section under the relative as well as the absolute indication, deliberately electing it. His belief was thus, in the near future, the maternal mortality could be lowered at least five per cent, while fully ninety-five per cent of the children could be saved. These results would pave the way for the election of the Cæsarean section in private practice.

Dr. H. J. Garrigues thought that the statistics by no means warranted the assumption that the Cæsarean section, even with the improvements of modern surgical technique, was an operation of less danger than craniotomy. The chances of saving the mother were five times as great in craniotomy. The only measure that seemed to him to offer a pretty good chance of success to the mother was the induction of premature labor, and where the case was seen in time, he thought that this was the proper thing to do.

Dr. R. A. Murray was in favor of elective Cæsarean section. When the deformity of the pelvis was such that no other operation could be done, the question of previous unsuccessful results was not to be considered. In the hands of the ordinary operator he thought that the Cæsarean section would probably yield as good results as embryotomy.

Dr. W. T. Lusk did not admit that the dangers of craniotomy were of so grave a character as those of the Cæsarean section, and he thought that it was an error to allow the idea of an equality in the dangers of the two operations to be promulgated. In large hospitals it was true that the results of the section had been good, but in the same hospitals there had been no deaths from craniotomy. While he disliked extremely to do a craniotomy, and would always avoid it if he could, his experience with the Cæsarean section had been such that he would do the former operation in preference, other things being equal.

Dr. C. Jewett, of Brooklyn, would perform embryotomy on the living fœtus: 1. As an alternative of other means of delivery by the natural passages in certain rare emergencies for the rapid termination of the labor in the interests of the mother. 2. As an alternative of the Cæsarean section: (*a*) When the mother was exhausted or her condition otherwise unfavorable for the abdominal operation; (*b*) when the conditions were not favorable for the child; (*c*) in disproportion between the pelvis and the fœtal head, but with a conjugate of from two inches and three-quarters to three inches or *more*, provided the mother so elected, after a full knowledge of the facts.

The life-saving capacity of the modern Cæsarean section for the mothers could not

be estimated at more than from seventy-five to eighty per cent. The average maternal mortality in embryotomy was about ten per cent. and was less in proportion as the pelvis was more roomy.

The choice of operation must take into account the skill and experience of the operator in abdominal surgery. The Cæsarean section was an operation for the expert, embryotomy for the general practitioner inexperienced in abdominal section. It was not true that the two operations were equally within the skill of every practitioner. Every physician became more or less familiar with the operating field of the obstetrician. Few had any practical knowledge of the surgery of the abdomen. The rights of the child must be ignored, but the rights of the mother must be paramount.

SECTION IN GENERAL SURGERY.

Meeting of April 13, 1891.

Dr. William T. Bull in the Chair.

Lumbar Nephrotomy.—Dr. Robert Abbe presented a patient who, five years before, had begun to suffer from renal colic and hæmorrhage. This condition had become continuous during the last two years. Six weeks since, the patient had come to him for advice, and was at that time suffering from hæmaturia. Examination with the cystoscope distinctly demonstrated that the bloody urine came from the right ureter. Nephrotomy was accordingly performed. The kidney was found perfectly normal on palpation. It was stripped free of the surrounding fat. Fifteen punctures were made. At only one of them was the operator able to feel anything apparently abnormal. It seemed as if the needle struck something gritty. An incision was made, enabling the speaker to pass his finger well into the pelvis of the kidney, but there no stone was found. The finger had come in contact with the gritty point before mentioned, which might have corresponded in feeling to a papilla of one of the pyramids. The wound was accordingly closed. There was no trouble resulting from the operation and no escape of urine from the wound. The interest seemed to lie in the fact that since the operation the patient had remained free from pain and there had been, so far, no return of the hæmaturia.

Dr. R. F. Weir said that there was a class of lesions sometimes found in the kidney which, though trifling enough in itself, caused a tendency to bleeding from the organ. It was at present too soon to form any conclusion as to whether a cure had been effected in the present case or whether the diseased condition was of the class he referred to.

The Treatment of Hernia by means of the Hank Truss.—Dr. S. E. Milliken in a paper on this subject, referred to the danger of producing excoriation or at times severe sloughing with the ordinary trusses of the shops. If this condition was brought about it made the treatment of hernia in young and delicate children exceedingly tedious and occasionally impossible. The hank truss, of which the speaker thought too little was known, was constructed from a loop of zephyr of the best quality containing from twenty-five to thirty strands. It was made of sufficient length to encircle the pelvis between the anterior superior spinous process and the trochanter major, with enough left to make a perineal strap. On one end a double tape was attached, corresponding to the affected side, and passed through the loop coming from the opposite side. Considerable care should be given to the adjustment of the loop. The method might be described as follows: With the index finger of the left hand passed through the loop and allowed to rest perpendicularly on the median line of the abdomen, ordinary tension should be made. The tape was now passed through the loop and the additional force necessary to bring the point of the crossing to the inguinal region would usually give sufficient support to retain the hernia. The free or tape end was then carried under the thigh of the affected side and tied to the band going around the pelvis. Where a double hernia existed, the second hank should be applied irrespective of the first. The truss might be worn a week or ten days without changing if the proper use of absorbants was made, and the best of these was sudiodide of bismuth. This powder might be renewed daily after giving a sponge bath. During the first few weeks no change of the apparatus should be attempted by the mother or nurse, for only after considerable technique had been acquired could protrusion be prevented, especially when dealing with a restless child. When the truss was worn as he explained, and was not changed more than once a week, and no protrusion was allowed to take place, at the end of two months it might, as a rule, and in the absence of contra-indications, be discontinued. Only one case of recurrence had come under the speaker's notice after cure by this truss, and in this the hernia had only recurred on one side, whereas a double hernia had formerly existed. He

was able to report some two hundred and sixty-eight cases treated by this method, and to present to the meeting a large number of patients in various stages of the process of treatment. He had concluded that among the advantages of the hank tress were: 1. Easiness of manufacture, no delay being encountered in the beginning of treatment. 2: Absence of spring pressure or severe elastic pressure and a lessened liability to produce excoriation or sloughing. 3. The pressure could be regulated without removing the truss. 4. Less weakening of the tendinous and muscular structures, which so frequently followed the use of ordinary trusses. 5. There was no danger of adenitis from pressure on the inguinal glands.

Dr. Abbe said he had at one time made an unsuccessful attempt to make use of this truss and had abandoned it, as it had seemed to cause pain. From what he had seen of its application in the cases presented, however, he thought it was a most seductive form of treatment, and he should certainly take it up again.

Dr. W. B. De Garmo desires to protest against a return to what appeared to him a relic of the past. For the practitioner located where he could not procure a suitable truss at once, this was a very convenient bandage for temporary use, but he should not consider himself justified in leaving it on as a permanent appliance. At this day, when we had many good trusses that could be worn by the most delicate infant, if properly applied, he felt that we had no excuse for using something that was neither cleanly nor efficient. It was true that many children were readily cured, even by the crudest appliance, but it was equally true that many others were allowed to go by the curable age by the use of a "makeshift" of this kind. A well-known institution where these bandages had been applied had recently furnished his clinic at the Post-graduate Medical School with abundant evidence of the unreliability of this so-called hank truss. According to the histories given, these children were all worse when they came to the clinic than when the bandage had been applied, and in most instances the yarn was in a filthy condition. Cleanliness, simplicity, and durability seemed to him the essential points in selecting trusses for infants. All these features were combined in the rubber and celluloid covered truss, with which the country was well supplied. These, fitted by the lead tape diagram method, appeared to leave little to be desired in the way of appliances of this kind. Nine-tenths of all hernias occurring in children under five years of age could be cured by a suitable truss; this implied the proper fitting of the truss and the keeping of the patient under observation until he was cured. If mechanical treatment failed, he should consider an operation justifiable.

The Curative Effect of Operations per se.—This was the title of a paper read by Dr. J. M. White, of Philadelphia, in which he considered an elaborately complied aggregation of the reported experiences of others, supplemented by his own, as to the palpable or possible evidence, immediate or remote, of the relief of symptoms, or the subsidence of concrete indications of pathological conditions, resulting from surgical interference, stopping short, however, of radical procedures. There was no lack of both startling and amusing data upon which to establish a theory that operations *per se* were sometimes productive of curative results, even where investigation could determine no macroscopic or microscopic physiological disturbance to account for the existing symptoms. The acceptance of this evidence, of course, landed the investigator upon that *terra incognita* in which such ambiguous phrases as hysterical manifestations, psychic influences, and reflex phenomena were the only terms left for the description of an unknown quantity.

Dr. Abbe was of the opinion that certain growths might be the result of mental influences producing changes in the circulation, disturbance to the physiological equilibrium, and ultimately a pathological product. When an exploratory operation was of benefit in these cases, it was because a change was brought about in the tissues by the manipulation of the lymphatics, the nerve filaments, and the vascular structure of the tumor itself. He thought, however, that the acceptance of the theory might lead to mischievous results from reckless operating for experimental purposes. Such cases should only be undertaken by those able to accurately weigh the chances of benefits to the patients. He did not believe that many instances of cure would be recorded.

Dr. H. J. Boldt did not believe that any malignant disease of the abdomen would disappear upon simply opening the region. In cases in which this result had been affirmed he considered the diagnosis had been incorrect.

Dr. Weir pointed out the fact that the tumors which disappeared after surgical in-

terference were generally situated in the abdominal cavity. He had never seen a tumor in the leg disappear under like conditions. In the abdominal cavity it must be borne in mind that there was an immense sympathetic nervous system. The interference with such a region might set up such disturbance as would bring about changes in the circulation, and thus influence the nutrition of any existing neoplasm. He was, however, very skeptical as to the curative effect of operations *per se*.

The further opinions expressed were in the same vein. It was conceded that psychic influences might be potent, but that they could not at present be demonstrated. For the most part the benefits which were derived from operations *per se* were due to retrograde metamorphoses in existing growths or to the irritative disturbances of existing conditions of malnutrition.

SECTION IN GENERAL MEDICINE.

Meeting of April 21, 1891.

Dr. R. C. M. Page in the Chair.

American Childhood from a Medical Standpoint.—Dr. Henry Ling Taylor read a paper with this title. The human organism, he said, was pre-eminent in its marvelous adaptability to the most varied surroundings and conditions of life. It had complex mechanisms for the reception, conveyance, storage, modification, and discharge of the showers of impressions constantly received through the sense organs and through the nerve endings in the skin, membranes, and tissues. We recognized that different individuals and races reacted somewhat differently; they had inherited or acquired special characteristics of mind and body, probably largely due to habits evoked by special surroundings and ingrained by frequent repetitions, either in themselves or in their ancestors. Which way did life in New York push the children? We knew that the city children with whom the physician was brought in contact got too little light and air, did not take enough of the right kind of exercise, were often overfed or underfed, lived in houses that were kept too hot, were often urged too much in their studies and especially in their emotions, and frequently, with shortened childhood, became little men and women before emerging from pinafores and knickerbockers. The children had, as a rule, the following characteristics: Weak ankles, strong legs, weak waists, shallow and inelastic chests, and weak shoulders and arms. The pale countenance and cold extremities gave evidence of a faulty circulation. The feelings and will might be intense or flabby, but in either case betrayed the lack of discipline. There was precocity in knowledge of people and social relations, and there was the darkest ignorance with regard to most natural objects and processes.

If the parents were in easy circumstances, the children were, as a rule, produced with difficulty from an overtaxed and undernourished stock, not from the superabundant vitality of robust natures. The mother rarely had vitality left to nurse her infant, and it was brought up on some substitute, which at best was only a makeshift. Whatever modern life had done for women, it did not seem to have prepared them for the intelligent care of their offspring. If our city life was so artificial that we required gymnasia, field sports, and outings to keep a descent physical equilibrium, we still needed to give some attention to vascular gymnastics, and the culture and development of the unstriped fibers which played so fundamental a part in our vital economy, by placing some reliance on the adjustive and resisting powers, and by a systematic and judicious exposure of the skin to cold water, air, and the vicissitudes of weather. The city child, instead of soil with its diversified coverings, had hard and mostly level floors or pavement; instead of grateful greenish, bluish, or brownish tints, the patchwork surface of our houses and streets; and instead of restful silence or simple, harmonious sounds, the irritating jar of complicated noises. Young city children of the primary-school classes had the most extraordinarily distorted ideas about the commonest natural objects, and much of this mass of misinformation remained in adult life. On the other hand, they were abnormally precocious in their knowledge of men and social relations and in general "knowingness." That the modern methods of school education produced many bad results was seen in the nervous condition of many children, in their headaches and ocular and other troubles. Nature was a good schoolmistress, and her lessons were the fundamental ones, no matter how much we might supplement them at school or university. The infant was learning his lesson when he was kicking out his legs, waving his arms, or bumping his head, the child playing tag or batting ball, or the youth working with his carpenter tools, or riding a bicycle, just as truly, perhaps more truly, than the university student burning midnight oil over Greek and calculus. Nature was never systematic in the school sense, and, however much we might system-

atize, we must at the same time cultivate our powers and round our individuality by keeping in close touch with so much of nature as lay within our horizon in a restful, informal way. Family life was perhaps the most important factor of all in the child's development, physical as well as mental and normal. The system of flat housekeeping prevented our women from being good house-wives, and the high-pressure work for the mighty dollar rendered the men anything but agreeable fathers; so that children really saw but little of what ought to go to make up a home for their training. Much of what had been said applied to certain classes in certain localities, and it might be thought that the physique of the children that were now growing up under our eyes was not, on the whole, satisfactory, and that it was a difficult matter to bring up wholesome, hearty children in New York. If this was so, it was well to recognize the fact.

The Chairman thought that the children in the cities were subjected to dangers which were overlooked. One was that their bowels were constantly neglected, and another was that they were allowed to go about with wet or damp shoes.

Dr. F. A. Castle argued that if attention to the bowels was neglected by children, it was the result of the present bad arrangement as to school-hours. Social usages had gradually pushed the hours for meals—that is to say, for dinner—later and later in the day, but the nine o'clock school-hour never changed, and children were often rushed off to school without adequate food or any other attention to natural requirements. He also deprecated the whole system adopted in the primary schools. All that the children did was to shout some nonsense in concert. The schools were simply bedlams; the system adopted not only served no purpose, but actually did damage to those who had to undergo it.

Dr. C. E. Quinby thought that to meet the requirements of the age, and especially of city life, it was necessary to turn out specialized men and women; and, this being admitted, there was a tremendous advantage in city life, which would put a child at twelve years of age where a person of twenty would not be in the country.

Fel Bovis Inspissatum as a Therapeutic Agent.—Dr. W. H. Porter read a paper on this subject. He made a most emphatic appeal to his hearers on behalf of what he had decided to be the great therapeutic utility of fel bovis inspissatum in all diseases which had for their source, or were under the influence of, pathological conditions of the digestive economy. He stated that the conclusions which he was urging had been arrived at after ten years of persistent use and careful observation of the drug. Adequate confirmation of the speaker's view of the matter was given by other observers, special emphasis being laid on the advantages accruing from administration of the ox-gall throughout cases of typhoid fever.

The Value of Auscultatory Percussion as a Method of Diagnosis.—This was the title of a paper by Dr. F. W. Jackson.

Dr. J. West Roosevelt complimented the author on the integrity of the work done and the conclusions drawn so far. He thought that the paper ought to show the value of auscultatory percussion and serve to make the method more popular. He was, however, sorry to hear that throughout the series of observations the nipple had been used as a landmark. Its position upon the chest was not constant, relatively, in any given number of subjects, and it was an utterly unreliable factor in measurements. The mid-clavicular line was very much to be preferred.

SECTION IN OBSTETRICS AND GYNÆCOLOGY.

Meeting of April 23, 1891.

Dr. Egbert H. Grandin in the Chair.

Birth of a Viable Child at Six Months and a Half.—Dr. H. Collyer reported a case of this nature. The woman was thirty-three years of age, had been married eleven years, and had had four children at term and one miscarriage. She had been under the speaker's care for chronic pelvic peritonitis, which fact had given him opportunities for observation in the case that he might not otherwise have had. On July 5, 1890, she menstruated as usual. On August 6th there was a scanty flow for three days. During the third week in August changes were noticed in the uterus characteristic of the earlier weeks of pregnancy. The woman stated that conception must have occurred on July 13th, denying its possibility before that date. On January 4, 1891, while she was working a sewing-machine, there was sudden and profuse hæmorrhage. All attempts to prevent labor were futile, and on February 3d she was delivered of a small male child weighing two pounds and two ounces. The child cried at once, and, wrapping it up warmly, the speaker waited for some five minutes till pulsation in the cord had ceased before separating the child from its mother. The placenta gave some

trouble, and there was found attached to it an independent lobule. The bones of the child's skull were soft and overlapping. The testes had not descended, and the finger nails were only just showing. The infant was wrapped in wool and put into a basket, which was placed near a fire kept continually burning. At first the child was fed with milk and water from a spoon every two hours, and subsequently from the breast. It had since continued to thrive in every respect. The date at which the child was born and the general condition of its development would indicate the period of gestation as six months and a half.

The Association of Rectal and Pelvic Disease in Women.—Dr. R. A. Murray read a paper with this title. When the anatomical connection between the genital organs and the rectum was considered, it was not strange, he said, that many diseased conditions of the one set of organs reacted on the other, and, further, that they sometimes had a causative relation. The vascular supply of the uterus, ovaries, and tubes was indirectly connected with the lower third of the rectum. The veins on the left side emptying into the left renal vein, the varicose condition of these veins was oftentimes the cause of symptoms of ovarian hyperæmia, and even of acute oophoritis. Constipation was not absolutely a disease confined to the rectum, but in a large proportion of cases it was a symptom which, if not the cause, was surely a concomitant of uterine trouble. The inflammatory diseases of the uterus and its annexa, tube, ovary, and ligaments, were, of all uterine diseases, by far the most frequently seen by the specialist. The first symptom present in almost every case was pain in the left side, over the ovary; next, flatulence and constipation. When the anatomical relations of the tissues in these parts were remembered, the cause of this condition of things was easily accounted for. In chronic displacements of the uterus—retroversion of retroflexion—the long-continued pressure of habitual constipation obstructed the circulation to such an extent that hæmorrhoids resulted, and the parametritis generally fixed the uterus on the rectum so that the use of cathartics only excited the inflammatory symptoms and made the patients afraid to take the remedies. In such cases the uterine symptoms were most prominent, and no relief was experienced until the communication between the portal and genital circulations was made freer. This was to be done first by correcting the displacement, secondly by relieving the constipation. For the constipation, enemata were to be preferred. Another result of chronic constipation was pouching of the lower third of the rectum. This condition was found frequently in virgins and gave rise to pain in the back, discomfort in standing, and the sensation of dragging and fullness, with a feeling that the parts would fall, due to the distention and varicosity of the vaginal and uterine veins caused by the formation of proctocele, which pressed the vagina forward. The author had seen fissures in the vaginal entrance which were painful and intractable, and which could only be cured by relieving the constipated habit and correcting the proctocele. In chronic retroversion, where the uterus was pressing on the rectum, and in chronic fixation of the uterus in any position, from pelvic peritonitis, the author had found that with constipation, and even without it, many patients complained of a discharge of glairy mucus from the bowels, with a sensation of burning during and after the act of defecation. This mucus was often stringy and in links. Following this, there might be a bloody discharge, particularly at the menstrual period.

On the relief of this catarrhal proctitis by aseptic injections of boric acid or mild astringents, the complaints of pelvic pain were often very materially lessened, although the uterine disease was not cured. Hæmorrhoids and painful fissures of the anus were frequently associated with uterine disease, either inflammatory in nature or due to the pressure of tumors. Where hæmorrhoids were due to uterine pressure, the reposition of the displaced organ was called for. Where this could not be done, much might be accomplished for the patient by keeping the bowels regular and relieving the pelvic circulation by rest in bed. The vaginal douche was indicated. The author had found benefit from the reduction of the hæmorrhoids after each action of the bowels, by pressure, while the patient was in the recumbent posture. It was noticed that most of the symptoms that patients complained of when suffering from prolapsus uteri were the same as those presented in a case of hæmorrhoids, the exception being the pressure of the tumor forward by the pile, the hæmorrhage, and the intense pain on defecation. This suggested that the trouble was really the same congestion of the pelvic veins. Fissures of the rectum often caused dyspareunia, which might be mistaken for vaginismus, and relief of the cause was quickly followed by disappearance of

the symptoms. Any and all of these conditions might be exaggerated, going on to abscesses in the recto-vaginal septum if the cause persisted, and finally producing a general breaking down of the health. In this paper the author's endeavor was merely to outline this subject, as there was so little said by authorities in regard to this particular question. If its consideration directed more attention to closely contiguous and related organs, he believed that many errors in diagnosis would be avoided and much more benefit result to patients.

Dr. H. J. Boldt said there was no doubt that this subject had been much neglected, and that the presence of rectal disease was too often overlooked by gynæcologists. In four-fifths of his uterine cases the patients were examined *per rectum* and obscure symptoms very often cleared up thereby.

The opinion expressed by Dr. Boldt was that of the speakers who followed him, and the author of the paper was thanked for bringing before the Section points full of practical suggestiveness.—*N. Y. Med. Jour.*

Special Correspondence.

London Letter.

THE LONDON UNIVERSITY SCHEME.—DEGREE FOR LONDON STUDENTS AT LAST. THE KOCH CRAZE.—DR. SYER BRISTOWE'S VERDICT.—MR. STEAD AND THE CURE FOR CANCER. THE EDINBURGH PROFESSOR'S TIE.

After years of wearisome delay and discussion, a scheme has been drawn up whereby the London students may have a chance of getting a degree upon reasonable terms. The proposed alterations have raised a storm of opposition throughout the country. The provincial schools offer the most determined resistance at the very outset to the constitution of the new Senate, and not without some show of "sweet reason," for the provinces are allotted four only out of forty-two seats. The Dean of the Birmingham medical faculty points out the "calm assumption of the metropolitan teachers that, at their mere desire, a great imperial institution like the University of London is to be made a narrow parochial undertaking." Then the present graduates are fearful of the lowering of the value of the degree they have so hardly won. However, the matter may be finally settled, medical students are likely to reap the benefit. The London degree has been so fenced in with high standards and other conditions so as to be practically prohibitic to the greater number of students. As a result, those who want a degree on reasonable terms are forced away to the provinces. Thus the policy of the London school for many years past has driven a regular exodus of students to Edinburgh, Durham, Glasgow and other University towns. Of late there has been a growing tendency to recognize the fact that very high standard examinations are a snare and a delusion, calculated to foster cunning rather than brains. It certainly looks rather like beginning at the wrong end of the stick to send a man out into the world so crammed with details that he has had no time to inquire into the principles of his art.

The Koch craze is about over. After waiting a sufficient time to get reliable results various meetings have been held in different parts of the country to consider the matter, and the verdict has been everywhere alike unfavorable to the remedy. Perhaps the most calm and philosophical summing up of the whole affair from beginning to end has been made by Syer Bristowe. He remarks that "collective results go to show that the use of Koch's fluid tends to cause more or less intense and widespread inflammation round the tuberculous deposits; that this inflammation in no degree tends (as Koch assumed to be the case in order to explain the supposed curative action of his remedy) to envelop and imprison the living bacilli in caseous cocoons, and so to prevent them doing further mischief; but that, as happens in the case of lupus, the inflammation in some cases becomes, from its very severity, a source of serious danger. "There can be no doubt that tuberculin is a very potent poison. The present writer has given it up to doses of a decigramme in a case of *lupus erythematosus* of seventeen years standing, in which the scalp was extensively affected. At first considerable improvement was effected, but at the end of three months things are very much as they were at starting. This result gives a fair echo of the general report, which tells of nothing but vexation and disappointment. And thus we come to the end of one of the most extraordinary chapters in the history of modern medicine. If we were to seek a parallel in outside affairs we could find nothing more nearly resembling it than the tale of the South Sea bubble, when society of all sorts and conditions lost its head over the fabled

treasures of the islands of the Southern Seas.

In the now famous journal, the *Review of Reviews*, Mr. Stead has taken up the cudgels for Count Mattei, the "Italian nobleman," who advertises all over the world cures for cancer. Unfortunately, the medical journals, with one exception, think it beneath their dignity to attempt to interfere in the matter, in spite of the immense harm that must result to the public at large. With his usual energy Mr. Stead has started a test ward of five beds at a small Hospital in London. He has a small committee of supervision, consisting of Sir Morel Mackenzie, Mr. Lawson Tait, and a Dr. Potter, sub-editor of a nursing journal. With regard to these proceedings the *Medical Press and Circular* has a slashing article, calling Mr. Stead's attention to the commercial aspect of the question and to the fact that Mattei's advertisements appear largely in his own paper. It also remarks that a layman is about as likely to throw fresh light on the therapeutics of cancer as an ordinary man would be to add to our knowledge of the differential calculus. The Count professes to work his cures by means of differently colored electricities. Recent examination by a distinguished London analyst has shown his "green fluid" to be absolutely negative in all its properties, and to correspond to no known substance in nature except water. If that be the case, this old Italian cynic beats the record by making a huge fortune out of the springs of his native country. There is something extremely ludicrous in the idea of retailing water all over the world in small phials at a high price. Some of the details of the Hospital, where the experiments are to take place, are suggestive. The matron is a firm believer in Mattei's powers and is said frequently to have proved the reliability of the "green fluid" in arresting hæmorrhages, indeed, for that purpose she uses nothing else. Of course, average medical men will wonder why on earth the matron of a Hospital should go about stopping hæmorrhages, nor will they be silenced by the assurance that the lady in question is the widow of a Bank of England director. Nurses are made, they will reflect, not born. Then we are told that the Hospital is looked after by two medical men, father and son, one of whom for a long time past has been in the habit of dispensing the Mattei remedies in the out-patient department. All this is taking place in good old conservative England. An editor who has cheerfully faced imprisonment in the cause of social purity, and whose pronounced religious views are of the strongest, is persuaded that an Italian layman has discovered the secret of curing a disease that admittedly baffles the efforts of legitimate surgery. Mr. Stead has the courage of his opinions when he backs this Italian advertiser to do what many thousands of his own countrymen, earnest men, trained in the study of disease, have hitherto failed in doing. Verily, *nemo omnibus horis sapit*—a proverb that is especially true of editors in quest of sensational copy.

The following is told of the Professor of Surgery at Edinburgh. In the course of a clinical demonstration he turned to a student who had just commenced his studies, with the question: "Now, Sir, can you tell me what is wrong with my dressing?" The ingenious youth turned red, and preserved a discreet silence. Mr. Chiene, however, was not to be put off, and repeated the question. After a long pause the youth stammered out in a fit of desperation: "Well, Sir, if you insist on my telling you, I should say your tie is not quite straight." As might be surmised this unexpected answer quite "brought down the house."

D. W.

Selected Formulæ.

OINTMENT FOR ALOPECIA.

The following combination is recommended in the treatment of alopecia (*Poitou méd.*, Jan. 1, 1891):

℞

Gallic acid	3 grammes.
Essence of lavender	1 gramme.
Vaseline	30 grammes.
Castor oil	20 grammes.

M. This ointment is used by means of friction upon the scalp.

CREASOTE IN THE VOMITING OF PREGNANCY.

Kaatzer, in the *Berliner Klin Wochenschrift*, gives the following formula for creasote in the treatment of obstinate vomiting of pregnancy:

℞

Creasoti pur.,	2.0 grammes.
Spirit-vini rect.,	30.0 grammes.
Tinct. gentianæ,	
Extr. coffeæ, aa.	10.0 grammes.
Aquæ dest.,	100.0 grammes.

M. et Sig. To be well shaken. Dose: One tablespoonful two or three times a day in a little milk.

The effect of this mixture will be found most gratifying.

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REPORTER.

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Make communications as short as possible.

NEVER ROLL A MANUSCRIPT! Try to get an envelope or wrapper which will fit it.

When it is desired to call our attention to something in a newspaper, mark the passage boldly with a colored pencil, and write on the wrapper "Marked copy." Unless this is done, newspapers are not looked at.

The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

HABITUAL CONSTIPATION.

Habitual constipation is one of the commonest and, very frequently, one of the most rebellious affections with which the practioner is called upon to cope. Recently a number of foreign journals have devoted considerable space to the discussion of this subject. Notable among the contributions are Nothnagel's, in the *Wiener Med. Presse*, and an editorial treatise in the *Revue Médicale*, of Louvain, in which we have collected much important information.

Defecation depends upon the regular contraction of the colon, and especially of the rectum. In the small intestine the fecal matter moves very rapidly (according to Bauhin the entire length of the small intestine is traversed in six or eight hours) while in the large intestine the fecal mass moves much more slowly. Intestinal peristalsis is largely influenced by the nervous system, and only in part depends upon a direct excitation of the muscular walls and the contained nervous mechanism. Innervation of the small and large intestines does not necessarily occur synchronously or similarly—the one is almost entirely independent of the other.

Intestinal contractions, which give rise to the expulsion of feces, occur normally periodically, one defecation occurring every twenty-four hours. This, however, depends largely upon the individual. Some having two or three movements daily, others but one movement in two or three days. Cases are occasionally met with where defecations occur only once in eight or twelve days, and others have been recorded in which defecation occurred from six to ten times in a year! These anamolies are, however, morbid, not physiological, and cases of this kind constitute the affection termed habitual constipation.

The causes of habitual constipation are varied. It may be the result of intestinal innervation, or of atrophy of the muscular

coat of the colon—a condition found by Nothnagel in *post mortem* examinations. The usual cause of habitual constipation is, however, enforced retention of feces, due to a persistent disregard of the call of nature, which is particularly the case in women. Such a state of affairs may be instituted during a long journey by stage or rail, where a false modesty on the part of the sufferer prevents his obtaining relief, or it may occur from willful disregard of the natural recurrent hour for defecation. Again, habitual constipation may be caused by indigestion, the result of a change of diet. An acute attack of intestinal catarrh, not infrequently leaves the patient with this trouble. Nothnagel does not attach the importance to atony of the abdominal muscles, as a factor in habitual constipation, as do other writers. Sedentary habits frequently lead to the trouble, while in some individuals it is hereditary.

The consequences of this condition are also varied, and are not necessarily identical in any two cases. In a certain number of instances hæmorrhoids, with all their well-known inconveniences, are the result. In a majority there is a loss of appetite, the digestive functions of the stomach being for the time depressed, as are also the same functions of the intestines; or it may be that the ptomaines formed in the stagnant intestinal contents, have, by means of their toxic actions, directly affected the digestive powers. Finally, it is by no means rare to find troubles of the central nervous system resulting from this disorder. This may be due either to a reflex action exercised upon the vaso-motor mechanism, or to a veritable poisoning by ptomaines. In the latter the troubles take the form of hypochondria, inaptitude for work, dizziness and vertigo; even cases of temporary insanity have been recorded.

A recent opinion, which has found extensive support among English physicians, has been advanced, claiming that habitual constipation in certain cases causes chlorosis. How far this may be true we are not in a position to say. It is, however, an incontestable fact that many cases of chlorosis have been cured by purgatives alone.

In the treatment of habitual constipation we must largely disregard the symptoms produced, and direct our attention to the treatment of the main point at issue: the trouble with intestinal peristalsis.

In this respect intestinal massage, and especially massage of the colon and rectum is the least used but the most valuable remedy. This procedure not only strengthens the muscular coats of the intestines, but also mechanically hastens the movement of the fecal masses within the intestines. In a similar manner faradization of the abdomen will be found valuable; more rarely a galvanic current is used, one electrode being inserted into the rectum. In the same line of treatment regular exercise and home gymnastics are to be recommended.

It is well, at the outset of the treatment to send the patients to some watering place, where there are mineral springs, and to keep them there during the course of treatment if practicable. If the patient cannot leave home, or as he in this country is not surrounded by mineral springs, as he would be in Germany, any of the many bitter mineral waters, which are mildly purgative, may be given regularly with advantage. Rectal enemata are also very valuable, as well as rectal injections of glycerine, or glycerine suppositories. As a rule, it is best to avoid the use of purgatives, but in a large number of cases this is impossible.

Purgatives may be divided under two heads: laxative purgatives and drastic purgatives. The former merely accelerate the peristaltic movement without irritation, the latter cause a greater or less amount of irritation of the intestinal mucous membrane.

In the first group may be included acid fruits, manna, tamarind, castor oil, calomel, etc. also saline purges. The latter, however, should not be used habitually. Among the drastic purges valuable in the treatment of habitual constipation are principally aloes, rhubarb and podophyllin. The three may be advantageously combined as in the following formula:

℞ Podophyllini.....gramme 0.30
Extr. aloes
Extr. rhei.....aa grammes 3.00
Extr. tarax.....q. s. ad. pil. no. xl.

Sig. One, two or three pills to be taken at night.

Colocquinth is also a very energetic drastic purge, but it is not well to employ it longer than for eight consecutive days. Jalap in large doses is equally useful, but should be avoided as it frequently causes nausea and vomiting. French writers recommend most highly cascara sagadra. The *Revue Médicale* giving the following formula:

℞ Extr. fluid, cascaræ sagad.
Syrup. cort. aurant.....aa, grammes 20.00

M. et. Sig. One or two teaspoonsful every two or three hours.

In cases complicated with bleeding hæmorrhoids, compound liquorice powder will be found useful. When all other purges fail, senna leaves or croton oil will prove effectual.

If purgatives are used for a long period, it is advisable not to use the same drug, but to change occasionally. Thus Nothnagel begins with the administration of aloes, and follows this by several weeks' treatment with purgative mineral waters; after this compound liquorice powder is given, and finally simple syrup.

Regarding enemata, the continued use of rectal injections of either water, a decoction of chamomile with a little flaxseed, or soap and water, or, finally, of pure glycerine, are frequently productive of excellent results.

Hünerfauth, in his work on the subject of habitual constipation, recognizes only three curative methods: electricity, massage and hydrotherapy.

For the electrical treatment he prefers the faradic current, if, however, the affection is accompanied by pain, the continuous current should be substituted. For the application of electricity the patient should assume the dorsal position with the lower limbs flexed. The current is then applied over the abdomen and rectum, or else within the rectum and over the abdomen, finally, over the sacrum and in the rectum.

Regarding massage, this treatment consists principally of frictions, pinching pressure, kneeding and striking, coupled with careful exercises, such as walking, riding, hunting, shooting and especially mountain climbing.

The hydrotherapy of habitual constipation consists, according to Hünerfauth, in douches over the abdomen, with friction, cold shower baths, and, finally, the application of a wet-pack at night over the abdomen.

In summarizing the various treatments of value in this affection, we must not omit the "cannon-ball treatment," which is, however, fortunately less heroic than its name might lead one to suppose, and consists in a kind of vigorous massage, the cannon-ball being rolled about over the abdomen, and occasionally even raised a few inches up and brought down with considerable force. These novel séances should last from five to ten minutes, and be repeated daily.

Finally, Nothnagel bases a further treatment on the hypothesis that a weakness of the abdominal muscles is one cause of habitual constipation. Dr. Ewer, for example, prescribes a system of gymnastics tending to strengthen these muscles, as an efficient remedy for the trouble. Dr. Enlenberg recommends Sweedish movements, or gymnastics for the same purpose.

In massage of the abdomen, the patient should lie upon his back with the abdominal muscles relaxed and masseur, both in kneeding and rubbing, use considerable force and pressure, following, however, always the course of the bowels, especially of the colon.

CORRESPONDENCE.

THE TREATMENT OF LOCOMOTOR ATAXIA WITH TUBERCULIN.

ED. MEDICAL AND SURGICAL REPORTER.—

The treatment of Locomotor Ataxia has hitherto been so unsatisfactory, both to patient and physician, that anything tending to throw light upon it is welcomed. This, then, is my ground for begging a few moments consideration. I do not write to

herald a new discovery, for I know not that it is new, nor that it is a discovery at all, but to stimulate further experimentation, and to obtain an interchange of experiences. I will briefly give my experience:

On the twelfth day of last March, Henry W., aged thirty-six years, a carpenter, a man of good habits and of good family history, consulted me for "rheumatism," which he stated had troubled him for over four years, and for the past year he had not been free from pain though "doctoring all the time."

Upon examination I found him suffering from well marked Locomotor Ataxia. Though he could walk after a fashion there was marked inability to co-ordinate, sluggishness of pupils, girdle-like sensations, darting pain in the limbs and complete absence of the knee-jerk. I told him there was nothing to do for him in the medical line, but that as I was using Koch's Lymph in the Hospital I would be pleased to try it in his case, as an experiment. Fully understanding that nothing was promised, he readily gave his consent, and the lymph was injected the same day. Reaction followed and the injection was repeated in two days. His pains at first increased, then rapidly diminished, under repeated injections, until at the end of three weeks, they had entirely gone. His co-ordination was much improved and his strength greatly increased. He has had as yet no return of pain, he can work at his trade, walks well, can run and is correspondingly happy.

Meanwhile another case, Ernst F., was under treatment. His sickness was of six years duration. He was entirely unable to walk unless supported, and his pain at night in the abdomen was so severe as to prevent his resting, obliging him to set up a great part of the time. The loss of co-ordinating power was very marked. Soon after receiving injections he became comfortable, could sleep all night, and his strength was markedly increased. He is now practically free of pain and can walk for twenty-five minutes without assistance. He has received no other treatment in the Hospital. At present I have three other cases in Trinity Hospital in which treatment has just begun. Reaction follows regularly. I have no theory to offer in regard to these cases. Can any one suggest one? Trusting to hear from any interested, I am, respectfully, W. H. Neilson, M. D., Milwaukee, Wis.

It is better to work for nothing than to be idle.

Book Reviews.

SURGICAL BACTERIOLOGY. By N. Senn, M. D., Ph. D., Professor of the Principles of Surgery and Surgical Pathology, Rush Medical College, Chicago, Illinois. Second Edition. Thoroughly Revised and Illustrated. Octavo, pp. 271. Philadelphia. Lea Bros. & Co., 1891.

The subject of Surgical Bacteriology is one of such universal interest to medical men of the present day, that any book which presents the status of the subject as it exists to date, based not largely upon mere personal prejudices, but upon the broader basis of incorporating, in compact form, the general outcome of scientific work, cannot fail to be popular with physicians.

The value of Dr. Senn's work and its appreciation by the profession, is shown by the appearance of a second edition within a short space of time.

This noted surgeon and investigator has given to the profession, in this volume, a résumé of the work of standard authorities on the various subjects which are therein discussed. When occasion demands, he does not hesitate to state his own convictions regarding disputed points; and, as the views, so expressed, are the result of careful clinical observation as well as independent original research, they add materially to the value of the treatise.

In the present edition, the arrangement of the work into chapters, not only renders it more useful as a text-book for ready reference, but also permitted the author to better classify the subject-matter.

As the former edition of this work has been fully reviewed in these columns, we will not occupy needless space by a repetition of the merits of the book, suffice it to say that the volume will prove a needed and valuable addition to any physician's library.

SAUNDER'S QUESTION COMPENDS: ESSENTIALS OF SURGERY. By Edward Martin, A. M., M. D. Fourth Edition. Illustrated, Revised and Enlarged, with an Appendix of Prescriptions, etc. Philadelphia. W. B. Saunders, 1891.

This is one of the best compends upon surgery that has been placed before the profession for a long time. Dr. Martin's large experience with medical students, as lecturer and instructor, has enabled him to appreciate their needs, and to amply supply their wants in his "Essentials of Surgery."

In fact, the book, in its present form, will prove not only a valuable aid to the student in systematizing his knowledge, but it also

will be found to be a handy work for easy reference to the busy practitioner.

In this edition the author has added an exceedingly useful appendix, which contains several hundred prescriptions applicable to the treatment of the numerous surgical affections, and, in addition, a list of drugs and materials used in antiseptic surgery, together with very full directions for the preparation of the various dressings, solutions, etc., for antiseptic procedures.

TRANSACTIONS OF THE NEW YORK STATE MEDICAL ASSOCIATION. Seventh Annual Session, held at New York City, New York, 1890.

This volume of more than 600 pages, contains a very full account of the transactions of the association at the meeting held during October of last year. A series of very interesting papers are included in the report; among which may be mentioned:—"Some Personal Observations Upon the Claims of Hypnotism, and Its Employment in Certain Diseased Conditions," by H. Ernest Shmid, M. D., of Westchester Co., N. Y.; "Intercranial Lesions," a discussion by Drs. W. W. Kern, Chas. K. Wills, and John B. Roberts, of Philadelphia; Jas. J. Putnam, of Massachusets; Chas. Phelps, Fred. S. Dennis, Jos. D. Bryant, Thos. R. Manley and John A. Wyeth, of New York County; "A New Method of Surgical Treatment of Certain Forms of Retro-Displacement of the Uterus, with Adhesions," by A. Palmer Dudley, M. D., of New York County; and "The Physician as a Witness," by M. Cavana, M. D., of Madison County, N. Y.

Many other entertaining papers and discussions are contained in the volume, all of which are a credit to the scientific and literary activity of the association.

INTERNATIONAL CLINICS. A quarterly collection of Clinical Lectures on Medicine, Surgery, Gynæcology, Pædiatrics, Neurology, Dermatology, Laryncology, Ophthalmology and Othology. By professors and lecturers in the leading Medical Colleges of the United States, Great Britian and Canada. Edited by JOHN M. KEATING, M. D., and J. P. CROZER GRIFFITH, M. D., of Philadelphia, and J. MITCHELL BRUCE, M. D., F. R. C. P., and DAVID W. FINLAY, M. D., F. R. C. P., of London. Illustrated. J. B. Lippincott Co., Philadelphia, 1891.

In placing "International Clinics" upon the market, the Lippincott Co., have devised a new and valuable scheme for supplying to the profession medical literature both of the latest and best. This "Journal," if so it may be styled, is to be issued quarterly, and is to consist entirely of clinical lectures which have been delivered by the leading clinicians in the United States, Great Britian and Canada. These lectures, reported by competent medical stenographers, are carefully revised by the lecturers themselves before being placed in the hands of the editors. The object of the work is to place in the busy practitioner's hands a journal which shall contain "the very cream of practical medicine and the most recent phases of clinical instruction," as they are given to students and the working physicians in our schools by prominent teachers throughout the English-speaking world.

The initial number for April contains 34 complete clinical lectures upon subjects pertaining to the various departments of medicine, of which the journal takes cognizance. Each lecture is in the form in which it was delivered to the class, and deals with the etiology, symptoms, diagnosis, treatment and prognosis of the subject in hand. Treatment is particularly elaborated in every article, so that all the latest and best methods are presented to the reader at a glance.

In the department of Medicine proper, with which the present issue opens, among other articles are lectures upon "Acromegaly," by Ross, of Manchester, Eng.; upon "Polyæmia or Plethora," by Porter, of New York; on "Angina Ludovici in Its Relation to Diptheria," from Finlayson, of Glasgow; "Sore Throat," by Sir Christopher Heath, of London; "Pneumonia," by Loomis, of New York, and upon "Uræmic Convulsions," by Shattuck, of Boston.

The department of Surgery contains lectures upon "Modern Methods in Surgical Operations," by Keen, of Phila.; "Ulcers," by Cheever, of Boston; "Schirrus of the Breast," by the late Dr. Parkes, of Chicago; "Cholelithiasis," by Robson, of London; and "Abdominal Nephrectomy for Pyolenephrosis," by Nancrede, of Ann Arbor.

In Obstetrics and Gynæcology are the teachings of Mann, of Buffalo, upon "The Early Diagnosis of Pregnancy;" of Cameron, of Montreal, upon "Elevation of the Temperature During the Puerperal State;" of H. T. Byford, of Chicago, upon "Urethritis;" and of Goodell, of Philadelphia, upon "Cancer of the Vagina."

Pædiatrics contains "Tonsellar Diphtheria," by Forcheimnier, of Cincinnati; "Different Types of Paralysis in Young Children," by Gray, of New York; and "Chorea," by Sir Dyce Duckworth, of London.

In the Neurological department, H. C.

Wood, of Philadelphia, contributes a clinic upon "The Remote Effects of Traumatisms as seen by the Neurologist;" Sachs, of New York, one upon "Functional Nervous Troubles and Neurasthenia;" Mills, of Philadelphia, upon "Myotonia and Athetoid Spasm;" Ferrier, of London, upon "Alcoholic Paralysis;" and Weir Mitchell, of Philadelphia, upon "The Treatment of Obstinate Sciatic Pain by Splint-Rest and Cold."

J. Solis Cohen, of Philadelphia, contributes to Laryngology a clinic upon "Stricture of the Larynx."

In Dermatology appear lectures of Fox, of New York, upon "Psoriasis;" of Ohmaim Dumesnik, of St. Louis, upon "Infantile Eczema;" and of Hyde, of Chicago, upon "Xarthema Lichen Planu, etc."

Ophthalmology and Othology are respectively considered by Chisolm, of Baltimore, and Buck, of New York, in lectures upon "Astigmatism an Often Unrecognized Cause of Headache," and "Stubborn Inflammations of the External Auditory Canal."

Of necessity, in the limits of a book notice such as this, it is impossible to give even a short synopsis of the foregoing lectures, and, indeed, where all are equally good the task would be a difficult one. The profession is, however, to be heartily congratulated upon the fact that within the covers of "International Clinics" the results of the work of the ablest teachers of medicine appear so condensed and arranged as to be most easily available and useful.

The journal contains 350 pages, whose typographical make up is excellent. Numerous wood-cuts and photographic reproductions assist greatly in elucidating the text. In these lectures are to be found just what the practitioner wants in the way of the latest theories as to causation of disease, with the newest methods of therapeusis as taught by the ablest clinicians of the day.

CREOLIN IN ALOPECIA.

℞

Creolin Pearson	¾ gr.
Hydrarg. bichlor	1–64 gr.
Aq. rosæ	3¼ f oz.
Aq. dest	13¼ f oz.

M Sig. Wash the scalp with the solution.

—*Swalowaski.*

The physicians of this country do more missionary work without charge than all the other professions put together.—*Ex.*

PERISCOPE.

THERAPEUTICS.

COPAIBA AS AN EXPECTORANT.

Recently balsam of copaiba has been found to be an excellent expectorant in cases of chronic bronchitis. The dose, as advised by the *Allgemeine Med. Central-Zeitung*, April 4, 1891, is 7 grammes daily, to be administered with 30 grammes of malt extract.

PIPERAZIN.

W. Epstein and C. Sprague publish a preliminary report of their investigations with piperazin, in the *Wiener Med. Presse*, April 19, 1891. The drug, which is a new one, has the property of dissolving large quantities of uric acid at the body temperature, and also—what is of greater value—even when a very large excess of uric acid existed, only the neutral and easily soluble uric acid salt would be found. One part of uric-piperazin is soluble in fifty parts of water at 17° C. When it is considered that the solubility of uric-lithion is only 1 to 368 at 19° C., it will be seen that piperazin is seven times more soluble. Piperazin is neither irritating or toxic and is therefore of great value in cases where a dissolution of uric acid is to be accomplished. Experience has shown that the result is well tolerated. The drug is administered hypodermically.

GIBBES-SHURLY METHOD OF HYPODERMIC MEDICATION AND CHLORINE INHALATION FOR PHTHISIS PULMONALIS.

HYPODERMIC INJECTIONS.

As chemicals may cause considerable pain to some people when injected under the skin, the site chosen may be previously treated by the application, for two or three minutes, of a wad of flannel which has been saturated with a mixture of ether and chloroform (equal parts), or, ether (two parts), chloroform (two parts), and menthol (one part), or better still, one of these mixtures may be sprayed upon the part. With many people, however, the pain is only momentary, and they will not require such preliminary treatment. The injection may be made at any time of day and without reference to temperature of the body. The evening will be found generally acceptable to the patient. Although the fluids may be injected at almost any convenient region of the body,

the gluteal region will be found preferable on account of the loose cellular and adipose tissue of the part, and because there is less danger of abscess or sloughing of the skin. The chemicals used should be *pure*, or troublesome abscesses will be likely to occur.

THE HYPODERMIC SYRINGE.

Any hypodermic syringe can be used. Care should be taken to keep the syringe clean. It should be washed with hot water and then with alcohol, or a five per cent. solution of carbolic acid, directly after its use. Drawing a little kerosene oil in occasionally will prevent the packing from getting too dry.

IODINE.

To commence with, the dose of the iodine solution should be about (1-12) one-twelfth of a grain, gradually increasing daily until one-half (1-2) or perhaps one grain is reached, when it may be gradually diminished or substituted at once for the gold and sodium solution. The temperature is likely to go higher for at least the first week, and as the chemical becomes diffused its effects may be shown in increased mucus secretion from the bronchial tubes, sensation of dryness of the throat, redness of the eyes, and coryza, characteristic erythema of the skin, diminution of urine or of diarrhœa, and loss of appetite. During this period there is generally loss of weight. In susceptible patients these symptoms may supervene after two or three injections only, in which case the gold solution should be used. In a few instances, after thorough diffusion, the characteristic reaction of iodine with starch may be obtained in the urine, and even in the perspiration.

CHLORIDE OF GOLD AND SODIUM.

The chloride of gold and sodium solution causes less pain than the iodine, in fact, in the majority of instances no pain save the sting of the hypodermic needle. The dosage, like that of the iodine, should be gradually increased, beginning with about (1-30) or (1-20) grain and increasing up to (1-5) or (1-3) grain. The more immediate effects noticeable from the larger doses are vertigo, nausea, sensation of constriction at lumbar region, and headache, and lowering of pulse tension. With many persons the continued use of this solution will cause profuse perspiration, which, however, is soon stopped or checked by lowering the dose or stopping the use of the chemical. When hectic fever is not broken up by these injections, hypodermic injection of bisulphate of quinine from three to six grains, alternately with the iodine solution, may be given with great benefit.

CHLORINE.

Chlorine may be administered either by directly diffusing the gas in the atmosphere of a small room, or spraying chlorine water through a face-shield inhaler. In either case it must be freely mixed with chloride of sodium. The gas may be evolved from chlorinated lime, by the addition of dilute hydrochloric acid, using from one-half to three drachms of the lime for a sitting, in a room about 8x9 feet and 9 to 10 feet height of ceiling.

Previous to this, however, it will be necessary to diffuse through the atmosphere a spray of a saturated solution of chloride of sodium, which spray should be kept up during the sitting. The patient may be allowed to remain in the room from ten to thirty minutes, according to the effects observed. While so placed the patient should be instructed to breathe through the nose, keeping the mouth closed, and to refrain from talking. If coughing supervene to any great extent the sitting should terminate. One, two or three inhalations may be given daily.

The chlorine water should be carefully made according to the U. S. P. It may be administered as a spray, mixed with a saturated solution of chloride of sodium, in the proportion of one-third to one-half. From one-half to two ounces of the mixture may be used at a sitting, once, twice or three times a day. In some cases after a time a general soreness of the throat may be complained of, when this happens the treatment should be suspended for awhile. Chlorine, by either of these methods, should not be administered where there is danger of hemoptysis.

HYPEROSMIC ACID FOR SUBORBITAL NEURALGIA.

Luciani, in the *Allg. Med. Central-Zeitung*, April 22, 1891, reports a case of suborbital neuralgia, in which hyperosmic acid was used with great success. The patient was a woman who suffered intensely from neuralgia of the right eyelid, and right cheek. All the usual anti-neuralgics had been resorted to without the least relief being obtained. Hypodermic injections of a one per cent. solution of hyperosmic acid gave prompt and lasting relief. The solution was given in syringeful doses, and repeated as required.

EXPULSION OF GALLSTONES.

The treatment of gallstones by large doses of olive oil is a subject that has received almost universal acknowledgement of late, and has been used so extensively that many other means, useful in accomplishing the same results—viz.: the expulsion of the gallstones—have been temporarily overlooked.

Foremost among these are the methods advanced by Prof. Harley, of London. He advises the administration of belladonna, and placing the patient in a hot bath. During the crisis inhalations of the following anæsthetic mixture may be given:

℞ Alcohol,..... 4 grammes.
Chloroform,..... 8 "
Sulphuric Ether,.....12 "
M.

Further, it is well to administer an emetic or purgative. Although opiates are generally used, Harley considers them contra-indicated in the majority of cases of affections of the liver. If, however, the pain should become unbearable, a hyperdermic injection of morphine should be given over the epigastric region. Still he has the greatest confidence in the efficacy of belladonna not only taken internally, but also in the form of liniment, plaster and suppository. An alkaline water should also be given the patient, composed of say a teaspoonful of bicarbonate of soda in a glass of water, or half milk and half water. It is impossible, says Harley, to give the patient too much of this mixture, since it lessens the irritability of the stomach, facilitates vomiting, and favors the secretion of bile, thus materially aiding the expulsion of the calculi. It should not be neglected, also, to administer a mercurial purgative, the following being recommended:

℞ Hydragyr. cum cretæ,.....0.40 gramme.
Pulv rhei,.....0.20 "
Magnesiæ,.....1.50 "
M.

Finally, Harley also claims to have achieved excellent results by digital manipulations and massage of the abdomen, as a means of causing the expulsion of gallstones.

The treatment of hepatic collic, as advocated by Prof. Lemoine, of Lille, and quoted in the *Revue Médicale*, March, 1891, is almost analogous with the above.

Internally, in the absence of emetics, he advocates potions containing ether or chloroform. Locally, over the seat of the trouble, he applies heat in the form of cataplasms. These should be very large, very hot, and renewed every hour. Frictions and rubbing with belladonna and chloroform over the hepatic region are also useful. Contrary to Harley, however, Lemoine has found that prolonged or oft-repeated baths produce a calmative effect which tends to hinder the expulsion of the calculi.

The following suppositories will be found most useful:

℞ Ext. belladonnæ,
Ext. opii, aa.....0.02 gramme.
But. cacao,.....6.00 "

These suppositories should be inserted every hour or half hour as occasion demands. The surest and most rapid method of relieving all pain is, however, by hypodermic injections of morphine; the pain disappearing in from five to fifteen minutes. About half a centigramme should be injected and repeated in half an hour if necessary.

For a purgative, Lemoine prescribes atropine with morphine in the following formula:

℞ Chlorhydrate of morphine,..... .10 gramme.
Neutral sulphate of atropia,.... .01 "
Cherry-laurel water,.....20.00 "
Mix.

Lemoine condemns the practice of inhaling chloroform or ether, claiming that it is apt to cause more harm than good. Neither should chloral be administered internally, it being badly tolerated.

THE THERAPEUTIC EFFECTS OF DIURETIN.

Reissler (*Vratch*, Nos. 46, 47, 1890, *Bull. Gén. de Théap.*)—The author has studied the diuretic effects of diuretin in healthy men, and he paid particular attention to its effect on the renal tissue; and he also studied its effects on the pulse and blood pressure. His experiments were made on a normal man, on four with heart disease, two with nephritis and one with cirrhosis of the liver. He arranges his observations into three divisions—before, after, and during the administration of the drug. The dose given in each case was one gramme, repeated to six grammes a day. The following results were obtained:

1. Diuretin acts incontestibly on the blood-pressure, raising it.

2. It is not solely a diuretic, but has a cardiac action.

3. The drug gives remarkable results, especially in those cases of asystole, which do not depend on insufficiency of the valves.

4. When the muscle of the heart is dis-

eased the effects of diuretin are less marked, especially its diuretic effects.

5. In acute nephritis its diuretic effects are more marked than in chronic nephritis. The albumen is never augmented even if the administration of the diuretin be continued.

6. In hepatic cirrhosis diuretin augmented the quantity of urine.

7. In healthy men the drug does not increase the diuresis.

ABORTIVE TREATMENT OF HERPES BY APPLICATIONS OF PURE ALCOHOL OR OF ALCOHOLIC SOLUTIONS.

Leloir (*La Pratique Médicale*, Feb. 17, 1891) has been able, in a number of cases, to completely abort herpetic eruptions of the lips by the local application of carbolized alcohol, in the form of compresses. This treatment, however, has not given satisfactory results in herpes of the genitals. The vesicles of herpes zoster are acted upon favorably, but the eruption does not disappear except in rare cases.

The influence of the treatment by alcoholic solutions is remarkable. Whether applied at the erythematous or at the vesicular period, the herpetic eruption is generally aborted, and this is accomplished very rapidly, usually in the course of a few hours.

Leloir employs alcohol in different forms. For example:

℞ Alcohol, 90 per cent.....25 drachms.
Pure resorcin.....30 grains.

He often replaces the resorcin by thymol (15 grains), menthol (15 grains) or phenic acid (3¾ grains).

Other formulæ are employed by the author, as follows:

℞ Alcohol, 90 per cent.....25 drachms.
Resorcin.....30 grains.
Chlorhydrate of cocaine..... 7½–30 grains.

℞ Alcohol, 90 per cent.....12½ drachms.
Tannin..... ..... 1½ drachms.

In private practice Leloir uses this preparation:

℞ Alcohol, 90 per cent..... 25 drachms.
Extract of cannabis indica....2½ drachms.
Chlorhydrate of cocaine..... 15 grains.
Essence of peppermint.....2½ drachms.

Compresses, moistened with one of these mixtures, are applied upon the eruption, and are fixed by means of pieces of adhesive plaster, or, for the same purpose, collodion and medicated gelatine may be employed.

—*Univ. Med. Mag.*

HYDROCHLORIC PHENOCOL.

Dr. Hertel, in the *Wiener Med. Presse*, April 19, 1891, reports of the value of hydrochloric phenocol, a new antipyretic and antirheumatic. The drug is a white, micro-crystalline powder. Chemically, it is produced from phenacetin, which, by the introduction of the saline amido-group, is rendered soluble in an acetyl residue. Hydrochloric phenocol is soluble in water, forming a clear solution. The fresh solution is of neutral reaction. Solutions, two days old, show a slight alkaline reaction which increases with the age of the solution.

So far, the drug has not been found to produce any unpleasant effects upon the heart, lungs, or digestion, even when given continuously in daily doses of 5 grammes. Hydrochloric phenocol does not have any effect upon perspiration, neither producing nor increasing it. As a test for its antipyretic properties, Dr. Hertel used it in a number of cases of phthisis with irregular hectic fever. Single doses of 0.50 gramme will cause a fall of temperature of about ½° C. Doses of 0.5 gramme to 1.5 grammes, given hourly, will generally bring the temperature down about 1° C. but only for a short time. Single doses of 1 gramme will cause a fall of 1–1½° C. within a few hours. The fall of temperature usually begins within an hour after the exhibition of the remedy, and lasts for about two hours. Five grammes, in divided doses during the day, will generally suffice to keep the temperature down. It seemed, however, to rather lack in efficacy in controlling high evening temperatures. In severe cases of acute muscular rheumatism, often accompanied with serious after-complications, the drug is frequently of value in relieving pain, when other remedies, such as antifebrin, antipyrin, salicylate of sodium and phenacatin have failed. The dose given was 5 grammes daily. In these cases, however, the drug entirely lacked any antipyretic action, the temperature not sinking to the normal until the rheumatism and the accompanying symptoms began to improve. In cases of severe gonorrhœal rheumatism the drug has no influence either upon the course of the disease or upon the fever. Hydrochloric phenocol exerts no deleterious influence upon the kidneys, although after the ingestion of 5 grammes the urine becomes reddish-brown in color, or even dark brown. This discoloration increases materially if the urine is left exposed to the air. Liq. ferri sesquichlor. added to the urine causes a still darker coloring, which is con-

siderably lessened, although not dispelled by the addition of concentrated sulphuric acid. The drug is eliminated with great rapidity, since twelve hours after its exhibition it can be no longer traced in the urine. The technical name of the drug is *amido-acet-para-phenetidin.*

MEDICINE.

TREATMENT OF ERYSIPELAS WITH SALICYLATED GLYCERINE.

For the past six years Dr. S. C. Inglessis has been treating erysipelas successfully with a solution of salicylate of soda in glycerine. A four to six per cent. solution is used as a lotion, and rubbed into the affected parts every two or three hours, after which the parts are covered with salicylated cotton. Simultaneously, if there is no heart weakness or albumin in the urine, the author advises the exhibition of 0.2 grammes of salicylate of soda daily. In all, he has treated thirty-six cases with this method, and all successfully. The application of the salicylated glycerine caused an immediate disappearance of pain and itching, and considerably lessens the course of the disease. When instituted at the outset of the disease the treatment will frequently abort it, and cause an almost immediate recovery.—*Semaine Médicale.*

CRYSTALS IN NASAL POLYPI.

At the meeting of the Society for Internal Medicine of Berlin, held April 21, 1891, and reported in the *Médicine Moderne*, April 30, 1891, Dr. Lewry reported the results of the microscopical examination of a large number of polypi of the nasal mucous membrane. The polypi contained large quantities of a fluid rich in albumin, in which, after a variable length of time, but usually within a few days, there appeared crystals of a double pyramidal form, and resembling in every particular the crystals found by Dr. Leyden in the sputa of asthenatics. The formation of these crystals seems due to a necrotic process, since they only appear some time after the removal of the growths, and increase in number. The theory has been advanced that these crystals, forming in nasal polypi, might find their way down the respiratory tract, and act as a mechanical irritant, thus producing asthma. Lewry's experiments however, have confirmed beyond doubt, that the crystals do not exist in the polypi until some time after their removal. It is, however, very possible that their fundamental elements existing in the blood act as an irritant. The same crystals have also been found in non-asthenatic cases, but this is most rare. They have never been observed in the tonsils or uvula.

ON AMICRABIAN FEVER FOLLOWING ARTERIAL OBLITERATION.

It has been frequently observed by Gangolphe and Courmont (*Le Bull. Médical*, April 8, 1891) that arterial obliteration, without external lesion, is followed by a rise of temperature even above 40°C. In order to explain the cause of this phenomenon they have instituted a series of experiments upon the lower animals. The investigators have thought that the fever is due to a reabsorption of the products resulting from the cellular desintegration occurring in the parts deprived of blood, but in which a new circulatory process has been started and, thus enhanced, the taking up of these cellular products formed during the anæmic condition of the part. When, however, these products are not absorbed, as for instance in the case of elastic ligatures applied in the course of the experiments, no hyperthermic phenomena occur. These elastic ligatures were tried in the scrotum of the animals used, and were allowed to remain for three days, during which, no changes in the body temperature occurred. At the end of this time the ligatures were removed, and of course the new cellular products would find their way into the general circulation, with the result that the temperature was considerably elevated.

In some instances the organism in a state of necrobiasis, or degeneration, were removed and from them was extracted a substance insoluble in alcohol but soluble in water, especially glycerinated water. This substance was found to possess a pyretogenic power.

From the researches made, the authors have drawn the following conclusions:

1. The existence of amicrobian fever is proven, clinically and experimentally, in cases of vascular obliteration.

2. This fever seems to be due to the reabsorption of the soluble pyretogenic products resulting from cellular desintegration of the parts in state of necrobiosis.

3. The subsequent decline of temperature, occurring at the time of elimination, is due to the diminution of the necrobiotic process and to the lessening of the vascular interference.

4. These pyretogenic products exist in large quantities in degenerating tissues; they

are precipitated by alcohol but are soluble in glycerinated water.

SURGERY.

PLASTER OF PARIS BANDAGES.

According to the *Medicinische Neuigkeiten*, April 18, 1891, the proper preparation of plaster of Paris for bandages is not generally understood, and, therefore, the results obtained are frequently unsatisfactory. The fluid used should be filtered rain-water, or still better, sour milk. Either will make an extraordinarily hard plaster. The addition of fine marble dust will also add to the hardness. An addition of 33½ grammes of alum and 33½ grammes of sal ammoniac to each ½ kilogramme of the plaster is also recommended. The following directions for mixing are given: The plaster should be put in a dry basin and formed into a cone, and then water or sour milk slowly added until the fluid has been drawn up to the tip of the plaster cone, *then* begin to stir. In this way the best results are obtainable.

TREATMENT OF TRACHOMA.

At a recent meeting of the Ophthalmological Society of Paris, the question as to what was the most efficaceous treatment for trachoma was extensively discussed. Darier advocates a thorough breaking up of the granulations by an operation under chloroform. The operation consists in a deep scarification of the conjunctiva and a subsequent scraping with the curette, and finally a brushing off with a very stiff brush soaked in a strong solution of bichloride of mercury. Within one or two weeks a fine cicatrical tissue is formed, without causing any deformity of the lids. Abadie has also used this surgical method for the treatment of trachoma with extraordinarily good results, such as he has never observed to follow any other treatment for this disease.

Gillet de Grandmont, was opposed to any surgical treatment, claiming that it sacrificed the continuity of the mucous membrane. He advocates the use of acetate of lead in the following formula:

℞ Plumb acetic..... ..... 2.0 grammes.
Glycerin, pur, anhydr.....10.0 grammes.
M.

This mixture should be applied by means of an antiseptic ivory spatula, and under its influence the trachoma disappears. This collyrium has no caustic action and therefore does not injure the conjunctiva or cornea.

Vigues strongly recommends the direct massage of the conjunctiva with applications of boric acid, and his statistics show that he has achieved brilliant results by this method, a few days sufficing to produce a marked improvement in every case.—*All. Med. Central-Zeitung*, April 22, 1891.

THE TREATMENT OF COLD ABSCESSES.

The treatment of cold abscesses by the antiseptic puncture is advocated by Piechaud (*Le Bull. Médicale*, April 8, 1891). The results of this simple procedure have been entirely satisfactory, no complications having followed the cures accomplished. The size of the abscesses treated has been variable, but the largest collections were met in the thigh and buttocks of children. The liquid of some of these abscesses showed, under the microscope, the presence of the streptococus and the staphylococus.

Twenty cases were treated as follows: After the puncture washing of the sac was ordered, and then the application of a solution of corrosive sublimate (1 to 1000) was made. This method usually brought about a very rapid cure, even in cases where the skin had become so thin as to threaten a rupture of the abscess. The author never observed untoward effects following the use of the mercurial solution employed.

GYNÆCOLOGY.

SALOL AS A DEODORIZER OF THE FŒTED DISCHARGES OF UTERINE CARCINOMA.

Drs. Marty and Plowezky, of Toulouse, recommended, in a recent number of the *Semaine Médicale*, the internal use of salol as a deodorizer of the fœted vaginal discharges in cases of internal carcinoma. The remedy is of especial value in cases when a vesico-vaginal fixtula exists, as the stench of the discharges of these cases is most sickening. The authors, arguing that in the organism salol would be split up into its two component parts, viz., salicylic acid and carbolic acid, gave the drug internally hoping to render the urine antiseptic. The results of their experiments exceeded their hopes, for in two cases, in which all the usual methods, such as vaginal injections of disinfectants, and tampons, had been tried in vain, salol given internally caused a complete disappearance of the fœted odor. The drug was given in doses of from two to four grammes daily. If this quantity was not

sufficient as much as six to eight grammes may be given daily without producing any unpleasant symptoms. Its action in cases complicated with vesico-vaginal fistula is most marked, the dribbling of the antiseptic urine over the carcinoma causing a continual process of disinfection.

INTRA-UTERINE GALVANO-CAUTERIZATION IN GYNÆCOLOGY.

Apostoli (*Bull. et Mem. de la Soc. de Méd. Prat. de Paris*, Feb. 15, 1891), in support of his electrical treatment, lays down briefly the following propositions: The galvanic current finds its principle indication in gynæcology in endometritis and fibromata; it is sovereign in circulatory and painful affections (amenorrhœa, dysmenorrhœa and metrorrhagia), and it is of powerful assistance in arresting the evolution of benign neoplasms, and in aiding in the reabsorption of peri-uterine exudations. It exercises a very salutary resolutive action in many of the peri-uterine phlegmasiæ and in catarrhal ovaro-salpingitis; but it is inefficient, and it may be even harmful in strong intensity, especially if the intra-uterine pole is negative, in the suppurating phlegmasiæ of the appendages.

In his justification of the application of high intensities, he claims that electrotherapy, as well as general therapeutics, should be essentially seasonable in its employment, and that its dose should be modified according to clinical indications, which vary in each instance. It has been necessary to employ the galvanic current in various degrees of intensity, in order to arrive at the most beneficial strength necessary to accomplish the desired object. In certain conditions high intensities of the galvanic current must be employed where weak currents will have no effect. The current should be increased in power progressively and with due warning to the patient. Every fluid collection, suppurating or bloody, uterine or peri-uterine, absolutely contra-indicates high intensity, while it calls for an evacuation more or less speedy, or for surgical extirpation. The current, however, in such cases acts as a valuable means of diagnosis, since relief not following its application, it will lead to the suspicion of a cystic condition which further examination will reveal. The positive pole of the constant galvanic current has, in addition, a powerful action in destroying microbes, especially the destructive bacteria.

The intra-uterine application facilitates the penetration *en masse* of the current, because the uterine mucosa of feeble resisting power will be readily traversed by the current. In cases of peri-uterine affections (para- and peri-metritis), if there be any resistance offered to the purely intra-uterine application, he claims immediate relief for the peripheral vaginal galvano-puncture. Patients thus treated have said that while "galvano-puncture has been the most painful operation, it has been followed by the most complete amelioration of the symptoms."

There is no danger of ultimate sterility from the intra-uterine treatment, since Apostoli has collected thirty observations of patients so treated who have gone to full term in a subsequent pregnancy.

During the eight years, from July, 1882, to July, 1890, Apostoli has treated 912 cases, consisting of 531 fibromata, 133 simple endometritis, and 248 endometritis complicated with peri-uterine phlegmasiæ (peri-metritis, para-metritis, or inflammation of the appendages). Eleven thousand four hundred and ninety-nine galvanic applications were made as follows:

8,177 positive galvano-caustics, intra-uterine.
2,486 negative " " " "
222 positive vaginal galvano-punctures.
614 negative " " "

During this time he has had three deaths, the first due to a galvano-puncture made too deeply into the peritoneal cavity upon an extra-uterine fibroid; the second due to a puncture of an ovaro-salpingitis, probably suppurative (no autopsy was made). There had been an intestinal perforation. The third was due to a grave diagnostic error, where an ovarian cyst was mistaken for a fibroma and improperly treated.—*Univ. Med. Mag.*

OBSTETRICS.

THE ELIMINATIVE TREATMENT OF PUERPERAL SEPTICÆMIA.

From a study of infectious diseases in general, and from observations on the methods of elimination of toxic substances from the organism by the natural emunctories, Héliodor de Swiecicki (*Gazette hebdomadaire de médecine et de chirurgie*) advises the employment of these means to rid the system of poison in puerperal septicæmia. Of course, the early treatment of this disease, if the case is seen in time, is, first, by asepsis and antisepsis by means of uterine irrigation, etc.; and, secondly, by the use of alcohol and every means to prevent the poison from

overpowering the organism. But, if the morbid germs and their products have surcharged the blood, the author says, the production of exaggerated diuresis and diaphoresis would be a rational method of eliminating the morbid elements. The treatment consists of subcutaneous injections of pilocarpine and the drinking of large and frequent draughts of sterilized chloride of sodium solution. If there is any difficulty in the patient's swallowing the solution, it is to be introduced directly into the stomach by means of a tube. The author reports the success of this method of treatment in several grave cases of puerperal septicæmia. The amelioration of the symptoms was prompt, the temperature falling, the pulse becoming less rapid, and the rigors disappearing in a very short time. The patient must be watched closely for any sign of heart failure, in the event of which small doses of alcohol are to be given.

HYDRASTIS CANADENSIS IN UTERINE HÆMORRHAGES.

Jules Bataud refers to the paper by Schatz, and to the recent theses by Cabanès and Pigache, which contain a *résumé* of the recent literature upon hydrastis. Bataud himself has studied the effects of hydrastis in four cases of uterine hæmorrhage which occurred in the wards of the Saint-Lazare.

The first case was that of a prostitute, twenty-seven years old, with secondary syphilis, who was unexpectedly arrested while street-walking, and was taken to Saint-Lazare. She was of a very nervous and impressionable temperament. Menstruation was regular, scanty, and accompanied with dysmenorrhœa. The patient had never had a child or a miscarriage, and, though she had been at the hospital a dozen times before, had never had uterine hæmorrhage. At the time of admission it was found that she had an enormous papulo-hypertrophic syphilide of the vulva and anus. On the night of admission she was seized with profuse hæmorrhage from the uterus, preceded by dysmenorrhœal pains, though she had menstruated only fifteen days before. The cause of the hæmorrhage was thought to be congestion of the ovaries and uterus, induced by the shock of her sudden arrest—such an effect is said not to be uncommon in patients brought to Saint-Lazare. An examination of the uterus and ovaries showed no cause for the hæmorrhage. The patient was given ten drops of fluid extract of hydrastis thrice daily, and the hæmorrhage ceased nine days after its first appearance. It is not clear from the text whether she took the hydrastis from the beginning of the hæmorrhage or not. The drug was continued for twelve days after the hæmorrhage had ceased. The following menstrual period continued only three days, and the flow was scanty as usual.

The second patient, a woman, twenty-one years old, was admitted for gonorrhœal urethritis and vaginitis, with discrete vegetations about the anus and vulva. Menstruation was regular and painless, lasting four or five days. She had had neither children nor miscarriages. While descending the stairs, one day after admission, she fell, striking her side over the region of the kidney. Two hours later she was seized with acute pain, and was obliged to go to bed. The same night very profuse and painful hæmorrhage from the uterus came on. There was a large ecchymosis in the left lumbar region. Forty drops of fluid of extract of hydrastis were given daily, in four doses. The next day pain and hæmorrhage were less, and in five days from the beginning of the administration of hydrastis, and in six from the time of the accident, the hæmorrhage had ceased.

In the third case, a woman, twenty-three years old, was admitted for syphilitic erosions of the mouth. Her menstruation had always been regular, scanty and painless, lasting four or five days. She had had neither children nor miscarriages, and never had menorrhagia or pain in the abdomen until three months before admission, when she rolled down stairs. This accident was followed by a sensation of heat and weight in her abdomen. Two days later menstruation set in, and was painful and much more profuse than normal, and continued ten days. In the interval between her menses the pains continued, and leucorrhœa developed. The last menstruation before admission was similar to the one just described. The uterus, vagina, and vulva were intensely congested. The dull curette disclosed no lesion of the endometrium. At the next menstruation the patient was kept in bed, and was given forty drops of fluid extract of hydrastis a day, beginning on the second day after the appearance of the flow. Menstruation lasted only seven days, and was less painful. The hydrastis was continued until the next menstruation appeared, which was not painful, lasting only five days, and was not as profuse as before. The congestion of the uterus is said to have been completely cured.

In the fourth case, a woman, thirty-nine

years old, had been curretted eight months before for metrorrhagia due to an endometritis following abortion. The patient was cured by the operation, and menstruation became normal as to quantity and duration. On the second day of one of her menstrual periods, she had intercourse with her husband. Instead of the flow ceasing on the fourth day as usual, it continued for eight days longer, the patient suffering at the same time from sensations of heat in the pelvic organs. Bataud saw the patient on the tenth day of the hæmorrhage, and gave her four one-grain pills of hydrastin a day. The sensations of heat and the hæmorrhage diminished from the first, and ceased on the second day. Since then she has had two periods, each lasting only four days. Absence of endometritis was proved by curretting the womb. Hydrastin was used instead of the fluid extract of hydrastis, because of the disagreeable taste of the latter.—*Revue Médico-Chirurgicale des Maladies des Femmes.*

PÆDIATRICS.

MEDICINES TO NURSING MOTHERS; INFLUENCE OF THE MILK UPON THE INFANT.

Schling (*Gazette de Gynécologie*, Feb. 15, 1891—*Paris Médical*) has made a series of investigations with various medicines, and obtained the following results:

Sodium Salicylate.—Dose, fifteen to thirty grains. When the child was not put to the breast for an hour or more after the administration of the drug to the mother, it was always found in the infant's urine and disappeared in twenty-four hours. If the infant nursed very soon after administration, there was no trace of the drug in its urine.

Potassium iodide.—Similar results. Analysis of the milk gave the characteristic reaction. Elimination in the infant lasted seventy-two hours; in the mother, forty-four hours. After twenty-four hours the milk contained the drug.

Potassium Ferro-cyanide.—Reaction very plain in the mother's urine. None in the infant's.

Iodoform.—Employed as applications to the vagina and vulva. After a rather prolonged use, as a rule, iodine was found in the milk and the mother's urine, but never in the urine of the infant.

Mercury.—Its transmission through the milk was always very feeble and irregular, and depended upon the quantity of milk absorbed.

Narcotics.—(a) *Tincture of Opium*, in doses of twenty to thirty drops. Thornhill has observed in the infant prolonged sleep. Fehling has noted neither prolongation of sleep nor constipation. (b) *Morphine Hydrochlorate.*—Solution 1-30; doses, gr. ½-¾. No ill effects upon the child. (c) *Chloral.*—Dose, gr. xv.-xlv. Mean duration of maternal sleep, two hours. No action was noted upon strong and vigorous infants. When the child is feeble or premature there should always be an interval of at least two hours between the administration of the drug to the mother and nursing. (d) *Atropine Sulphate.*—Solution, 1–100. Subcutaneous injections, gr. 1–200—1–120. Pronounced symptoms were observed in the mother. Dilatation of the pupils was noted in the infant, which disappeared after twenty-four hours. The drug should not be given to nursing mothers except in very small doses.

Influence of Maternal Fever.—In an immense majority of cases the milk has no ill effects upon the child. When the mother was the subject of a grave disease with a persistent temperature of 104°, the fever curve of the infant presented the same characters as that of the mother. In a case of mastitis, Bumm has demonstrated the presence of micrococci in the milk and gastro-intestinal disturbance in the child.—*Univ. Med. Mag.*

ADMINISTRATION OF ANÆSTHETICS TO CHILDREN.

Dr. Ness, in a discussion published in the *Glasgow Medical Journal*, reports 1080 cases in which anæsthetics were employed at the Hospital for Sick Children. In all these cases careful notes were taken, and there were at least a thousand more of which no record was kept. Chloroform was almost invariably used, ether being employed only in exceptional cases. No death has ever occurred during the administration of an anæsthetic. The mode and details of administration are not given.—*N. Y. Med. Jour.*

THE PREVENTION OF OPHTHALMIA IN THE NEW-BORN.

Simeon Snell, in the *Lancet* says, this it appears established that the ophthalmia of the new-born is a disease which permits of distinct prevention, and that even careful cleansing with plain water is sufficient. There may be reasons against entrusting such a strong solution of nitrate of silver as Credé advocated to nurses, but a much weaker solution would suffice. It may, however, be perhaps as well to use some

antiseptic with the water employed for cleansing, in the manner used at the Jessop Hospital. Directions are now freely given to nurses and midwives as to the employment of antiseptics for the lying-in woman, and the sublimate solution freely ordered will do excellently for bathing the infants' eyes. Some of us who see the terrible effects of the disease are earnestly impressed with the importance of doing all we can to prevent its occurrence. As far as we are able we must spread knowledge as to the dangers of delay and the benefit resulting from early treatment. The obstetrician has, however, the opportunity of preventing the disease. The teacher can find occasion to bring the subject before his pupils, and the writers of text-books, whether for medical students, midwives, or monthly nurses, should urge the importance of the affection and give directions as to the means necessary for prevention. No text-book should, he thinks, be published without some such teaching. The disease is particularly met with among the poor—much less frequently among the well-to-do. Hence the importance of midwives, who by degrees are acquiring a better and more recognized status, receiving thorough instruction in the subject.

HYGIENE.

CORROSIVE SUBLIMATE AS A DISINFECTANT AGAINST THE STAPHYLOCOCCUS PYOGENES AUREUS.

Dr. A. C. Abbott, in a study of this subject in the Bacteriological Laboratory, in the Johns Hopkins Hospital, believes that the following conclusions are justified:

1. Under the most favorable conditions a given amount of sublimate has the property of rendering inert only a certain number of individual organisms. That is to say, the process is a definite chemical one, taking place between the protoplasm of the individual bacteria and the sublimate in the solution.

2. The disinfecting activity of the sublimate against organisms is profoundly influenced by the proportion of albuminous material contained in the medium in which the bacteria are present.

3. The relation between the golden pyogenic staphylococci and sublimate is not a constant one. organisms from different sources and of different ages behaving differently when exposed to the same amount of the disinfectant, for the same length of time.

3. The organisms which survive the exposure to the sublimate, may experience a temporary attenuation. This attenuation, however, may be caused to disappear by successive cultivation in normal media.

IMMUNITY FROM INFLUENZA OBTAINED BY VACCINATION WITH CALF LYMPH.

The *Medicinische Nenigkeiten*, April 18, 1891, speaks of the interesting researches of Dr. Julius Goldschmidt, regarding the immunity from influenza, or grippe, afforded with recent vaccination with calf lymph. Dr. Goldschmidt's attention was first called to the fact, when during the epidemic of influenza of 1890, there occurred also a good deal of small-pox in Madeira, and he was surprised to find that those whom he vaccinated escaped from the epidemic. In all he vaccinated 210 patients, in 112 of which the lymph took. Of the remaining 98, only 15 were seized with grippe, and then only in a very mild degree. In one household of twenty-six members, all who were not vaccinated had the influenza, and two of them nearly died, while twelve who had recently been vaccinated escaped. The author claims that the immunity to influenza shown by the majority of children is due to the fact that they have been more or less recently vaccinated.

At these times when the influenza seems again to be premeditating an extensive tour, these facts are not only of interest, but warrant our careful consideration.

MEDICAL CHEMISTRY

CONVENIENT URINE TESTS.

To test for albumin, Raabe uses trichloracetic acid in the following manner. (*Merks Bulletin.*) About one cubic centimetre of urine, previously filtered, is poured into a narrow test tube, and a small crystal of trichloracetic acid is dropped into it; it is then set aside for a while, without shaking. The acid soon dissolves in the bottom of the test tube, and at the plane of contact of the two layers of fluid a distinctly visible and sharply defined turbid zone forms, if albumin be present. Even the slightest quantity of albumin can be detected with certainty and promptness, because the contrast between the turbid zone and the supernatant clear fluid is very distinct. According to this author, trichloracetic acid produces no precipitation in normal urine. Only when the latter abounds in urates, a slight haze develops after some lapse of time;—this can

be avoided, however, by gently warming the urine, or by diluting it with three times its volume of distilled water. He ascertained, by comparative tests, that trichloracetic acid is decidedly more sensitive, as a test for albumin, than either nitric or metaphosphoric acid.

According to Roch sulpho-salicylic acid is a very sensitive and reliable reagent for albumin. It is a product of the action of sulphuric anhydride on salicylic acid. By its means, the presence of egg-albumin can be proved with certainty in a solution of one part of the latter in 20,000 parts of water. To test urine for albumin, all that is necessary is to add a few crystals of the readily soluble sulpho-salicylic acid to a few cubic centimetres of clear urine and shake. The appearance of turbidity indicates, with certainty, the presence of albumin; for all the other constituents of urine—such as peptone, glucose, urea, uric acid, etc., remain in solution; the albumin alone being precipitated by this reagent.

Certain substances which may be present in urine, such as arsenic, salicylic acid etc., may interfere with the test for sugar, by either the fermentation method or with Fehling's solution. In order to eliminate this source of error Bishop advises treating the urine as follows: The urine is first shaken with animal charcoal. As soon as the fluid appears colorless, add baryta water, boil, allow to cool, and filter. To the filtrate add cautiously a weak solution of cupric sulphate in moderate excess, allow to stand for one hour in a covered vessel, decant and filter. To the clear solution add H_2S water in excess, or better, transmit H_2S gas through the solution. Then filter, apply a gentle heat to expel the H S which may be present and again filter. The solution is now practically free from everything which would interfere with the determination of sugar, and the operation may be finished by either of the usual methods.

Nothnagel communicated at a recent meeting of the Vienna Medical Association, a paper received from Dr. Becker, of Cairo, on a simplified test for sugar, which depends upon the fact that the paper used for the manufacture of visiting cards contains a large quantity of potash to make it heavier and fuller. When this paper is brushed over with a concentrated solution of sulphate of copper and then dried, the salt is crystallized on the surface. If the urine containing sugar is then added by means of a bit of wood and allowed to dry by the action of the air, or by holding it over an Argand burner (without browning the sulphate of copper), the latter is liquefied by the water contained in the small crystals, and the alkaline paper immediately produces the sugar browning reaction. The more sugar the urine contains the darker the color produced. The author considers the test highly sensitive.

NEWS AND MISCELLANY.

HIGHER MEDICAL EDUCATION.

At the meeting of the Board of Trustees of the University of Pennsylvania, held May 21st; Dr. Pepper made an offer of $50,000 towards an endowment fund of $250,000, and of $1000 annually towards a guarantee fund of $20,000 annually, for five years, conditioned upon the establishment of an obligatory graded four-year course of medical study. This was accompanied by a communication from the Medical Faculty, pledging themselves to carry out this proposal, and to enter upon the four-year course in September, 1893. It was also reported that the members of the Medical Faculty had themselves subscribed $10,000 annually for five years to the endowment fund. The Board of Trustees expressed warm approval of the proposed advance in medical education, but postponed their assent until the success of both funds had been demonstrated.

The approaching completion of the fine Laboratory of Hygiene, built by Henry C. Lea, Esq., will render the medical facilities of this school unequaled. It is to be hoped that the neccessary pledges will be secured promptly, as the interests of the entire community are deeply involved in the success of this great advance, which will enable medical students to obtain a thorough practical education in every branch of their profession.

THE SUPPRESSION OF QUACKERY IN ITALY.

During the first half of 1890 the number of complaints of "illegal exercise of the healing arts" brought before the authorities was 843. In 325 of these a conviction was obtained; in 145 the accused were acquitted. What the result was in the remaining 373 cases does not appear, but it is satisfactory to see that at least a considerable proportion of the offenders were brought to justice. It is to be hoped that the penalties inflicted will be sufficient to deter not only the guilty persons themselves, but others from pursuing their evil ways.—*British Medical Journal.*

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Clinical Lecture.

AMPUTATION BELOW THE KNEE—ARTIFICIAL ANUS—SARCOMA OF SHOULDER—RADICAL CURE OF HERNIA—CARCINOMA OF BREAST; REMOVAL—TUBERCULAR ARTHRITIS OF KNEE-JOINT; EXCISION OF KNEE-JOINT.

BY J. WILLIAM WHITE, M. D.

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AMPUTATION BELOW THE KNEE.

Gentlemen:—Our first case this morning is an old one, which I operated upon in last Wednesday's clinic. I bring the patient before you to-day merely to show you the result of the operation, which—as you will remember—was an amputation of the leg, below the knee.

You see the results, so far, are perfect. Not a drop of pus has formed; and from the one remaining drainage tube there has been only a slight serous discharge. The largest part of the wound has healed by first intention. The flaps are also of good color, and apparently well nourished. The patient has only had an immaterial rise of temperature, has a good appetite and looks well. Had this been an ordinary amputation, these results would naturally have been expected, since the operation was conducted antiseptically. But the young man you see before you was brought here for operation in an apparently moribund condition, suffering from an aggravated case of gangrene following a crush of the leg, and to get my flaps I was forced to go dangerously near the diseased parts. The results are a surprise to me, for at the time of the operation the patient's chances for recovery were very slim. Even now we cannot feel justified in giving an absolutely favorable prognosis, although the probabilities are that a complete ultimate recovery will be the result. This case is an example of the value of antiseptic surgery even in cases already gravely infected. Not only can we almost invariably prevent septicæmia or gangrene—but even when those conditions pre-exist, can frequently check their course. Such results as these are always most gratifying.

ARTIFICIAL ANUS.

I shall as quickly as possible show you the results of the other operations I performed at the last clinic. I am glad to be able to report that all are doing excellently well; not a drop of pus in a single case.

This man was operated upon for carcinoma of the colon. His condition was truly a pitiable one. Besides the colon being carcinomatous in almost its entire length, he also had a recto-vesical fistula, and was passing fecal matter through his bladder. His sufferings were intense. I performed colotomy, opening an artificial anus in the left groin. The patient is now doing well; he has had several large and comfortable stools through the artificial anus, and the fecal matter in the urine is growing less. What is now in the urine is probably from feces that were in the lower part of the colon before the operation, and will soon disappear.

Of the course this can at best be only considered a palliative operation, but it prolongs life and alleviates suffering.

SARCOMA OF SHOULDER.

This is also an old case, and has been doing remarkably since the operation, which was performed a week ago. The case was one of sarcoma of the shoulder. The growth was an enormous one, involving the shoulder joint and humerus, necessitating a very large wound and making the operation a formidable one. To-day you see that the wound has entirely healed by first intention with the exception of one point in the track of a drainage tube. There has been no pus, and no material elevation of temperature. The patient's condition is excellent, and she is now practically out of danger.

RADICAL CURE OF HERNIA.

The last of the cases operated upon last week was that of this man, over 70 years old, who had a very large irreducible hernia. It was undoubtedly the worst case I ever operated upon. The results of the operation can be fairly called perfect. Healing has been entirely by first intention, and there is no evidence of any return of the hernia. This slight swelling over the wound is due to œdema, not to a return of the hernia. Whether or not the operation will prove itself truly a "radical cure" remains yet to be seen, but the prognosis is undoubtedly good.

CARCINOMA OF BREAST.

The first case for operation to-day is one of carcinoma of the breast. The patient is a woman fifty-four years old. Before proceeding to the operation let me tell you that the two kinds of growths most frequently met with in the breast, are sarcoma and carcinoma. The following points are valuable for differential diagnosis. Sarcomata are soft; they occur before or during the middle of life; the skin is free and not involved, except that there is usually a venous enlargement. Carcinoma, on the contrary, usually occur late in life; the skin is adherent; the growth is hard, and frequently nodular, and the nipple retracted.

The latter symptoms are all present in the case before us.

The first step of the operation is to make two superficial incisions across the growth in the form of a crescent. We then proceed to dissect out the growth. One of the superficial incisions should extend well down into the axilla to facilitate the cleaning out of this part. Never run the risk of including diseased tissues in your flaps, or in your fear of removing too much and leave infected tissues behind. Also never fail to remove such portions of the pectoral muscles as are attached to the tumor.

One part of this operation which, for a subsequently successful result, requires the utmost care, is the thorough cleaning out of the axilla. In these cases the neighboring lymphatics are always infected and should therefore be carefully removed. This part of the operation is also by far the most difficult. Over the pectoral region we are comparatively safe, no large blood vessels being near, but here, in the axilla, we are working among a net work of large veins and arteries. You see I not only remove the lymphatic glands, but also any loose pieces of fat or tissue; in fact clean the whole axilla out, leaving nothing that might act as a seat for further infection.

Having now removed the growth, I bring the edges of skin together, and find that they approximate nicely. The wound is now closed with a row of sutures and dressed antiseptically, all bleeding points, which during the course of the operation have been caught by hæmostats, having been tied.

Before going to the next case, let me reiterate the necessity of removing all diseased tissue. It matters but little whether the wound is entirely covered by skin or not, but it is of the greatest importance that every particle of diseased tissue be removed, whether it be muscle, or gland, or skin. Unless this is accomplished, your operation will be worse than useless.

TUBERCULAR ARTHRITIS; EXCISION OF THE KNEE-JOINT.

The history of the young woman before us is one of tuberculosis. Several members of her immediate family have died of consumption. The patient herself has been suffering from an enlargement of the knee for some time, and has faithfully tried various methods of treatment, including the rest cure. But to no avail, and she is now practically a cripple, being unable to use the limb in any way. From the family history and the local evidences, the case is evidently one of tubercular arthritis of the knee-joint and we will excise the joint.

You see I elevate the limb as high as possible to render it bloodless. This is often a more satisfactory procedure than applying an Esmarch bandage in such cases, as forcible pressure could very possibly rupture a distended capsule and drive tuberculous or purulent material into the tissues above the joint. Indeed, I have not unfrequently seen this to be the case, and serious suppuration follow in consequence. Then again, there is nothing to be gained by the application of the bandage, since the limb can be rendered equally bloodless. This being accomplished we now place an Esmarch tube above the knee to control all possible hæmorrhage.

The operation of excision of the knee-joint consists in making a straight incision across the joint, turning up the flaps; removing of the patella; sawing off of the condyles; a thorough cleaning out of the joint; drainage; an antiseptic dressing, and the application of a suitable splint.

After having made my superficial incision, and having removed the patella by severing its tendenous attachments, I find that

the under surface of this bone is necrosed. The head of the tibia is also badly diseased, as are also the condyles of the femur. I find a large mass of synovial tissue and other evidence of tuberculosis. This confirms our initial diagnosis of tubercular arthritis of the joint. I am careful to remove all these infiltrated tissues, since if left behind they would undoubtedly be new foci for an extension of the disease. I divide the lateral ligaments freely. I saw off a good deal of bone from both the head of the tibia and condyles of the femor, three quarters of an inch at least, on account of the necrosed and softened areas which extend beyond the surfaces of the bones. You see these fresh bone surfaces look healthy, and straightening the leg, I find that they fit snugly together, leaving the limb in a more normal position. This operation is now practically completed, care being taken that all loose tissue is removed. Personally I prefer to ligate all bleeding points, but many operators depend merely upon pressure and elevation for the arrest of hæmorrhage. The wound may now be closed, an antiseptic dressing applied, and the limbs placed in a well-padded Gooch's splint. The prognosis is good.

THE TREATMENT OF SYPHILIS.

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Gentlemen:—I will now present to you a man with the characteristic rash of a secondary syphilis. He is 24 years of age, who had a gonorrhœa, a few months ago for the first time, and a chancre seven weeks ago, with no history of the period of incubation.

I wish now to speak to you a few words on the proper way of treating syphilis. In the first place, do not treat the initial lesion by the use of strong caustics, cold water dressings, lead water, lime water, or the black or yellow wash. Always bear in mind that absolute cleanliness is the true foundation of all treatment. When there is any tendency to ulceration in the lesion, by burning the parts vigorously you only cause the inflammatory areola to break down in ulceration at a later period. The very best remedy to use for the initial lesion of syphilis of all that I know of is iodoform, and you get that in the pleasantest form possible, under the name of Merck's iodoform. I wish to give you a point in this connection. We hear a great many people say that they cannot use iodoform on account of its odor, and it will be smelled by everybody. If you use iodoform carefully, and in small quantities, people will not be able to detect its presence. In other words, when you are dressing a chancre with iodoform, be careful that the iodoform does not get on the clothes of the patient, put on only sufficient to cover the sore, place a piece of cotton over that, and then draw the prepuce forward over the cotton. Then you can use iodol or aristol, if you choose, instead of iodoform, but neither of these is as good for this purpose as iodoform. Aristol is a good remedy to employ where there is not a very active stage of ulceration present.

If there is a good deal of hardness present and the chancre is "lumpy" it is well to wash the parts first with soap and water, and then with a five per cent. carbolic acid solution, dressing it with blue ointment.

When a man comes to you like this one, it is your duty to make the unpleasant fact known to him that he has syphilis as gently as you can, but with all the seriousness that the case demands. Impress upon him the necessity of his continuing under treatment for the next two years at least, and, in the majority of cases, you will find, if they start in with a good constitution, they will come out cured of their trouble at the end of that time. The idea that syphilis is an incurable disease is based upon the information that there is a diathesis behind all the stages of this affection which we are powerless to treat, and that our therapeutic measures are utterly useless in this respect. There are some cases, however, that will act badly, but by care and attention, and with a knowledge of the proper remedial agents, you will be able to tide them over their difficulties in time. Then again, there are other cases that, even with the best of care and attention, this diathesis seems to get the better of them and obtain complete mastery for a long period of time. You must bear in mind that syphilis is a constitutional disease, the tendency of which is to lower the vital powers and develop certain lesions which may be the means of producing invalidism in your patient and perhaps death. It behooves people, therefore, who have syphilis, to put their house in order, so to speak, and keep their health up to the highest possible standard of development. This is in reality the keynote of successful treatment

in these cases of syphilis. A man came to my office the other day with a minute chancre of the upper lip, so slight as to be hardly recognized from a herpes. He had enlarged submaxillary glands also. He told me he had a project by which he could make a large amount of money, and he wanted to know if I thought he would be able to undergo a certain amount of mental strain which this scheme would devolve upon him. I told him practically no, and informed him that he was in a condition in which he was not warranted to draw upon either his physical or mental resources. That it was his duty to husband his vital forces and not draw upon them for present use. If a man worries and bothers himself about the business and cares incident to a financial life, while under the influence of the syphilitic infection, you can well understand that this strain upon his nervous system is going to do him harm, and your treatment of his case by the therapeutic measures at your command will not result in much practical benefit to the patient. In treating a patient with syphilis put him into as good a mental and physical condition as possible, for, bear in mind this one fact, that the effect of the mind on the malignity of syphilis is very great indeed.

If your patient be a drinking man he must stop this habit, but it does not follow because a man has syphilis, you should teach him prohibition doctrines. There are a good many of those men who are accustomed to the use of a glass of beer or ale, and there is no valid reason that they should not be permitted to take a glass or two a day, if they want to. They should be advised to go to bed as early as practicable, avoid catching cold and over-fatigue. In other words they must not put their mental or physical qualities to the test in the way of overfatigue or over-exertion. Time and time again can I look back and see children grow up to puberty vigorous and healthy, both mentally and physically, whose parents I have treated for syphilis years ago. It is always well to impress these patients with this hope of an ultimate cure, because there are some whom you will find it difficult to keep under treatment and observation for a proper period of time.

If a patient with syphilis has some little functional trouble, as for instance, a bronchitis, look out for that trouble. Having this chronic infectious disease he is very liable to have some pulmonary trouble added thereto. It is always well for a patient with syphilis to guard himself against exacerbations or development of that infection and in that way he will avoid the complications of the disease.

Some of you, no doubt, have read in the books that syphilis is largely a mathematical problem, and by regarding it as an abstract factor, they compute in figures the amount of mercury required for this abstract problem. This is a very routine way of treating this disease. Every case of syphilis is a law unto itself, and a dose which affects one man favorably, will affect another man unfavorably. A dose which will remove the poison in one patient will prove utterly powerless in another.

In the case of this man before us who presents with the first general manifestations of the disease you would not give him iodide of potassium. This drug is contra-indicated in the earlier stages of syphilis, except there be some severe trouble of the brain or periosteum. The proper way to treat this man would be to give him a pill of the protoiodide of mercury, for of all preparations of this drug for internal use the proto-iodide of mercury is the best.

There is no necessity for the use of any tonic in this case, though in a good many patients you will find it very essential. As a general formula you will find the following a very good one:—

℞

Hyd. protoiodidi	viii gr.
Ferri et quin cit	3 jss
Ext. Hyoscami	vi gr.

M. ft. Pill xxxii. S. Three a day.

If under the use of this medicine the glands are going down the remedy is doing your patient good, and you ought to keep him on this treatment for a month at least, but, if on the contrary, the remedy was not acting properly and your patient was not showing any signs of improvement under its use, then you can increase the dose of mercury to be given each time. You will rarely have to give more than three grains of the protoiodide of mercury a day and four grains will be the maximum amount you should give in the twenty-four hours, for if you do not produce the desired effect with that dose, you are not going to produce it all. At the onset of the disease it is well to give large doses of this drug and always inquire of your patient how it is acting. Ask him how he is feeling, whether he is losing or gaining in weight, whether his thoughts are clear and capable of the same amount of mental strain as before the onset of the disease, and these points in the treatment of syphilis will be a guide for you in your medication of the patient.

Some people will tell you that the guide to the availability of mercury depends entirely on the mouth. Such a view as that is erroneous. If, after the use of mercury for two or three weeks, you observe the condition of the gums and find any trouble there, touch them with the solution of iodine and keep up the use of the mercury. The mouth often becomes irritated by reason of defect in it, and the mercury will be well borne and produce its physiological effect if you keep the mouth in a good state. It is always a good plan to make peace with the mouth under these circumstances. The tests of the efficiency of your mercurial treatment is then the rapidity with which the lesions of syphilis vanish. It is well to give your patient for the first two or three months the protoiodide of mercury and then stop for a while, giving him the iodide of potassium and the tincture of gentian for a week or two. If in the early stages of the disease you cover four, five or six months with your treatment, you are going to cure your patients more efficiently than by giving them an interval of rest in the early stages of the disease. Every day during the first year of syphilis is a matter of vital importance, for during this time the disease is more amenable to treatment than at any other period of its history. Keep these patients as persistently and as constantly as you can during the first six months under the use of the mercury. Old Ricord used to say that he could cure syphilis in six months. In many cases he no doubt would, because he would keep the patient continuously under observation and treatment.

There is a limit to the use of the protoiodide of mercury in syphilis. It is well to give it for the first month or two and then to use inunctions of the mercurial ointment And here let me in this connection say a word about the use of the pill. hydrargyri. The blue pill is about as uncertain and capricious a remedy as you can get. It simply amounts to this, that when it is pushed on the patient, it will produce salivation as rapidly as possible, but when it is acting blandly, it is doing nothing at all. It is one of those drugs that you do not know in what way it is going to act. I have studied this subject with great care for many years, and I may say this, that the therapeutic effect of the protoiodide of mercury after two months of the disease is absolutely nil. It seems to develop in the system of the patient a tolerance for the drug, and possesses for no longer period the power of dissolving, destroying, or burning up these small round cells which constitute the evidence of syphilis. Therefore, after having given these pills for the time I have stated, then begin with your inunctions of the mercurial ointment. Take thirty, forty forty-five grains of mercurial ointment and have it thoroughly rubbed into the arm, having previously washed it with soap and water and then with a solution of carbolic acid. As the disease commences around the blood vessels in its permeation through the system and the lymphaties are its chief channels of distribution it is, therefore, always well to act on the glands whenever you can do so. Therefore, have the axilla well washed out and the ointment well rubbed in there. If you see any irritation over the parts cover it with Laselle paste which is composed of two parts of starch, two parts of oxide of zinc, with four of vaseline, to which may be added four or five per cent. of carbolic acid. In that way you will keep down the dermatitis. In giving the ointment, it is a good thing to have the whole neck up to the scalp rubbed in with these inunctions, for in that way you bring the mercury in contact with the whole surface of the body. You are in this way accomplishing two things, you are destroying those small cells that develop in the skin, and you are, at the same time, permeating the skin with the mercury which is producing its effect on the glands. It has been shown that by excising portions of the skin near the genitals in parts remote from the seat of the initial lesion you find small cells in the skin under the microscope. Therefore, you should bring your mercurial ointment into direct contact with the whole skin. You can cover the whole body in seven or eight rubbings, but these rubbings must be done faithfully and intelligently. Having gone over the whole body it is well to give the patient rest for three or four nights, and while he is taking the inunctions it may be advisable to ask him if his mouth is sore, if he has a diarrhœa, or pain in the stomach, does he sleep well at night, and is he nervous or depressed. If he replies no to these inquiries, then that is all right, and you are treating his syphilis efficiently. Continue with your inunctions till you have given your patient forty or fifty rubbings, and as a general thing, thirty-five or forty grains of mercurial ointment, will be sufficient. In this city, however, a patient cannot stand that amount of mercurial treatment, but if he were out in the open air with nothing to do and free from care and busi-

ness, he can stand a good deal more of this kind of treatment than if otherwise situated. There is no law regulating the amount of mercurial inunction you use in a given case to guide you but your own judgment. If your patient be a poor, weak, individual, perhaps twenty-five grains of the mercurial might be enough, and if he be a robust, vigorous man, he may require as many as sixty grains. It is always well to wait, before giving these inunctions, till the secondary symptons begin, so that you may know where you are, except where the lesion may make its appearance on the mouth or face of the patient and proves to be a menace to the health of those that surround him. While you are giving these inunctions, you can make use of the stomach for the purposes of tonic treatment. In giving these patients treatment, impress upon them the absolute necessity of rest and recreation. During the summer have them go away to the country as long as possible, and as an aid to the inunction treatment, let them take very hot baths in order to produce free diaphoresis, or have them go to the Turkish baths. Stimulating the circulation and producing diaphoresis in this way seems to scatter the mercurial ointment throughout the system.

In some cases you will find that regional treatment is necessary, and it may be necessary to have certain parts covered with the ointment all the time. Push this treatment on for the first year with the mercurial.

But suppose that your patient cannot use mercurial inunctions, what then is to be done? In such a case as that you have a sovereign remedy in the injections of mercury. There is no preparation that I have found, and I have been using it now for over 23 years as an injection, that has given me better results in this respect than the bichloride of mercury. Get an ordinary hypodermic syringe, keep it in the cleanest possible condition, cleanse the surface of the body you are going to inject, and then inject under the skin one-sixth, one-eighth or one-twelfth of a grain of bichloride of mercury in ten minims of water, and in that way where the stomach fails, where the inunctions are inadmissible, you will find that you have a remedy that will not disturb the stomach, and will affect the syphilitic infection favorably, while at the same time preserving the stomach for the use of medicines that will build the patient up. I never experienced so much difficulty in the treatment of these cases as I have had this winter, and have found great help from these injections.

Now to sum up the treatment of these cases, I would say push on for the first year your mercurials, giving your patient a couple of weeks rest after the first six months, and then toward the end of the first year you can use your combination of mercury and iodide of potassium, or the so-called mixed treatment. The following formula you will find very satisfactory:

℞ Hyd. Iodidi,.....iij to ix grains.
Potass. Iod.,.....iv ʒ to vi ʒ.
Aquae. ad,.....ʒ iv.
M. and S. A tablespoonfull three or four times a day as the case requires.

Push this treatment on the second year, and you will generally find that your patient will be cured. In the vast majority of cases you will have the best result follow such a treatment as I have here given you in cases of syphilitic infection.

COMMUNICATION.

THE SPECIFIC AND THE NON-SPECIFIC TREATMENT OF PULMONARY CONSUMPTION.[1]

BY THOMAS J. MAYS, M. D.

PROFESSOR OF DISEASES OF THE CHEST IN THE PHILADELPHIA POLYCLINIC.

It goes without saying that the successful treatment of pulmonary consumption depends entirely on a correct and rational view of its origin. On this ground, there can be no division of opinion. Unfortunately, however, one part of the profession holds that the tubercle bacillus is the sole cause of the disease; while the other part believes that the disease depends on numerous other causes, and that the bacillus is merely one of its products or concomitants.

Now, it must be confessed that diametrically opposite opinions on a question of such tremendous practical and public importance, is no great credit to a profession which is justly proud of her logical conquests, and which rightfully rejoices in her scientific achievements, and in her work of philanthropy. Especially is this a misfortune when we consider that the whole difficulty rests on an erroneous interpretation of the fundamental terms which are involved in

[1] Read before the meeting of the Pennsylvania State Medical Society at Reading, June 3rd, 1891.

the question; and in endeavoring to prove this, I desire it to be perfectly understood at the outset, that I yield to no one in my admiration of, and I might even say in my veneration for those pains-taking explorers who so patiently and assiduously devote their life and energies to the investigation of this fearful malady. But I do not regard this as a question of personal reverence. It is one which must determine the true relation of the consumptive to his family, to his friends and to society; whether or not he is to be looked upon as a center of infection, a source of danger, and liable to spread the disease among those who are well.

Where then lies the fundamental misapprehension? It is (1) in affirming that, because a disease is capable of being communicated from one animal to another through inoculation, that, therefore, it must be contagious or infectious among the human species; (2) in holding that the disease (tuberculosis) which is produced artificially in animals through inoculation, is the same as that (consumption) which is naturally produced in man; and (3) in assuming, that, because an immunity can be created in animals by inoculations with a modified form of the tubercle virus, the same can be done in man. Furthermore, there is no warrant for believing that a disease can be cured by antogonistic inoculation unless it is clearly infectious or propogated from man to man through contagion.

The whole inception and progress of the infectious theory of consumption rests on animal experimentation, and recent history still reverberates with the assurances that the key to the cure of this disease was lying waiting in the lap of the experimentalists, whose dicta were to be blindly accepted whether they accorded with clinical experience or not. I am a firm and positive believer in the immense good which comes from well conducted laboratory research, and I think I have given sufficient practical evidence of my high appreciation of such work; but I also recognize the fact that the great bane of modern medicine is the tendency to subscribe to the premature conclusions of experimentalists which are wholly unsupported by bedside experience.

Professor Semmola of Naples, Italy, well strikes the key-note of this error, when he says (*Med. Press and Circular*, Feb. 25, 1891, p. 195): "It is painful to see these men carried away with this enthusiasm of Koch's fluid when they know that such a wide gulf exists between theory and practice, and when the very laws of scientific pharmacology and rational therapeutics are violated. The mistake exists in neglecting to see the gulf that lies between the laboratory and the clinic where all such fine dreams are blasted."

I am free to say that the mortification of professional pride, and the shock to public confidence recently perpetrated in the name of a specific cure for consumption, would all have been saved if we had raised our standard of treatment higher than the walls of the laboratory, and planted it on the solid and rational ground of practical experience.

I am not unmindful, however, that those who indorse the contagion theory claim that aside of experiments on animals, there is ample clinical evidence to justify their belief. Let us briefly examine these claims. Their chief argument is the work of Cornet, who investigated the death-rate from consumption among the nursing members of the Catholic convents and monasteries in Prussia, and found that this disease causes 62.88 per cent of all their deaths (*Zeitschrifte für Hygiene*, vol. vi, p. 65). This is, indeed, a high death-rate, but it does not demonstrate the contagious nature of consumption. It merely shows, what was well known before, that this disease prevails largely among those who lead indoor and confined lives. According to Dr. Baer's research (*Ueber das Vorkommen von Phthisis in dem Gefängnissen*, 1884) the death rate from consumption among German prisoners is greater—ranging from 64 to 90.9 per cent. Another point which destroys Cornet's conclusions entirely, is forcibly brought out by Dr. Baer's statistics. These show that prisoners who suffer solitary confinement, and who have, of course, no personal contact with any outside sources of the disease are more vulnerable to consumption by 20 per cent. than those who are allowed to associate with each other.

Another argument is that houses in which consumptives died are centers of infection. This is principally based on the research of Dr. Flick, who believes from his investigations, that 20 per cent. of the houses in the fifth ward of the city of Philadelphia are so infected. It is interesting to observe, however, that Dr. Flick's conclusions are not corroborated by other observers equally competent who have studied the question of house infection. Dr. Langerhans, who practised medicine for nine years in Madeira, an island which is visited every winter season by about 400 consumptives, states (*Zur Aetiologie der Phthisie*, Virchow's Archiv. 1884, vol. 96. p. 289) that these invalids are

lodged, boarded, and in great part nursed by English colonists, varying from 210 to 250 in number, who live in about 100 houses. The rooms which are occupied by consumptives in the winter, are reoccupied by the resident families during the summer —thus insuring the closest intermingling of the well with the sick. House infection should certainly make its influence felt here, but the health records which have been accurately kept since the year 1836, show that only four of the English colonists died from consumption during all this time, and that one of these suffered from the disease before he came on the island.

Dr. Adams, of Colorado Springs, states in a private communication to me, that Colorado Springs has been a health resort for about seventeen years, and comprises about 11,000 inhabitants, and that the majority of the rooms in the boarding houses are, and generally have been constantly occupied by consumptives. Yet, after a diligent search among the physicians of that place, some of whom resided there from the first, he could only find a record of seven cases of consumption which originated there during this time; and so far as he could ascertain, none of these were especially exposed—at least none were husband, wife or sister who had charge of another consumptive.

Dr. Haupt, one of the resident physicians of Soden—a beautiful watering resort for consumptives, in Germany, says that there are one hundred and one families, whose members with the aid of servants, lodge and nurse consumptives and other invalids during the summer seasons. During the winter the same rooms are reoccupied by the members of the landlord's families. This has been going on for 33 years, and during this time there were exposed to this contagion, if so it may be called, 653 persons, fifteen of whom died from consumption, but in most of these the source of the disease was traceable to inheritance, to colds and exposure, but none of them to contagion.

Now when these facts are connected with other well known facts, such as the statistics of the Brompton Hospital for Consumption in London, and the Friedrichshain Hospital in Berlin, which fail to show a single case of contagion among 262 physicians and clinical assistants, and 1017 nurses—the former during 36 years and the latter during 16 years; the declaration of Dr. Detweiler, that during 14 years not a single case of consumption was contracted among the nurses and employees in his hospital for consumptives at Falkenstein; or the fact that among a collection of sixteen hundred and twenty-six cases of consumption among married people (for particulars I refer to my address on Hygiene published in last year's Transactions of this Society) the same disease existed in both couples only in 44 instances. I think no further proof is needed to demonstrate that consumption is not propagated from person to person through contagion.

I hope I shall be the last one to deny to my colleagues on the other side, the same honesty and conscientiousness of purpose as I ascribe to myself; but should this make me willing to brush aside this weighty mass of clinical testimony which is diametrically opposed to the contagion doctrine, and to accept as my guide, principles of treatment which are conceived in theory and born of fancy, and which have nothing to support them in bedside experience? He who has been a diligent observer during the last ten or fifteen years, must be aware by this time that every specific measure which has been proposed for the cure of consumption, from benzoate of soda, and hot air inhalations to tuberculin, has been a dismal failure, in spite of the fact that they have all been shown to possess strong anti-bacillary powers. Glance at the beggarly results which have been obtained from tuberculin. According to recent official reports,[1] fifty-five in number, issuing from the clinics, polyclinics, and pathological institutes of the Prussian University, only about one per cent. (10) of 932 consumptives, who received the specific treatment were cured. This is, indeed, a very diminutive proportion of cures when we reflect that all but one of the latter were in the first stage of the disease. There cannot be the least question that so far as the treatment of consumption is concerned, the bacillus theory leaves the profession exactly on the same level which it occupied ten years ago. Not only did it not advance the interests of pulmonary therapeutics, but it deflected research into channels of error, and served as a barrier to an investigation of the true causes of consumption.

Let us now relinquish the gloomy side of this picture and turn to the hopeful experiences of those who practically disregard the teachings of the bacillus theory, and treat the disease according to its clinical indications. First of all I shall refer to the experience of the late Dr. Brehmer in his world renowned institution at Görbersdorf, in Germany. In 1887 he gives the statistics of

[1] *Die Wirksamkeit des Koch's schen Heilmittels gegen Tuberculose.*

150 cases of consumption which he treated, 12 of whom were in the first; 80 in the second; and 58 in the third stage. Of these, 15.3 per cent. were cured, and 11.3 per cent. in whom the disease was arrested. Of those in the different stages he cured 50. per cent. in the first, 20. per cent. in the second, and 1.7 per cent. in the third stage of the disease.

In 1888, he gives the statistics of 554 cases which he treated, of whom 49 were in the first, 310 in the second, and 195 in the third stage. Of those in the first stage he cured 36.1 per cent., in the second, 9.7 per cent., in the third, 0.5 per cent.

The results reported in the Sixth Annual Report of the Adirondack Sanitarium, under the supervision of Dr. Trudeau are not less encouraging. Fifty-two patients were treated in the following stages: 21 in the first, 18 in the second, and 13 in the third. Of those in the first, 13 or 61.90 per cent.; in the second, 2 or 11.11 per cent.; in the third none were apparently cured[1]—showing a total of 28.84 per cent. cures. Besides these it is shown that there are 11 cases, or 21.15 per cent, in whom the disease is arrested, that is, in whom all constitutional disturbance has disappeared for several months, but in whom the bacilli, cough and expectoration are still present. It may not be too much to hope that a number, and possibly most of the arrested cases will in time go to swell the list of the cures.

Similar favorable testimony concerning the non-specific treatment of consumption is also attested by other institutions of a like character, notably by that of Dr. Detweiler, of Falkenstein. In fact such institutions demonstrate that the successful treatment of pulmonary consumption is no longer to be disputed, and they show that no chronic medical disease is so amenable to treatment as pulmonary consumption.

A most interesting point in this question is the fact that there is a consensus of opinion as to the methods which bring about the best results in the treatment of this disease. The first is *an institution* in which the patients are under the immediate and direct supervision of intelligent physicians and nurses. In regard to these Brehmer in no uncertain tones says (*Therapie der Chronischen Lungenschwindsucht* 1887, p. 93), "Special institutions for the treatment of consumption give the greatest promise of cure." Dr. Trudeau states (*Transactions of American Climatological Assoc.*, 1889, p. 168), "If anything is to be done for those who are both poor and consumptive, it cannot be done outside of an institution." Many other physicians who have had experience of this sort are equally emphatic in their opinion on this subject.

The second is *rest*, or at least a rigid control of the physical movements of patients. On this subject Brehmer says (*Mittheilungen aus Dr. Brehmer's Heilanstalt*, 1889, pp. 43 and 45.) "This much I can assert that all fatigue is an injury and a poison to the consumptive. * * * The healthy individual rests because he is tired, but the consumptive must rest so that he cannot become tired."

One of the important instructions in Dr. Trudeau's Sanitarium is, "When feverish, patients will do well to make as little exertion as possible. Fatique, when induced in persons still having active disease is sure to be followed by loss of appetite, fever, exhaustion, and even sweating." (Trans. *American Climatological Assoc.*, 1889, p. 174.)

Dr. Detweiler, in his report for 1886, states that every patient who is not confined to bed must repose in the open air on a reclining chair throughout the greater part of the day.

Dr. Volland, of Davos, who has had extensive experience in the high altitude treatment of consumption declares (*Die Behandlung der Lungen-schwindsucht im Hochgebirge*, p. 18) that rest in the open air is the first duty of the consumptive patient, and that, if he is able, he is allowed to sit out-of-doors, and if not, he is confined to bed in a well ventilated chamber.

This feeling to regard *rest* as such an important element in the successful management of consumption is not confined to these and other public institutions, but is also shared by private practitioners, and it is based on the sound pathological reason that consumption is not a local disease of the lungs, but one which implicates the whole constitution. A consumptive must be looked upon as one verging on physiological bankruptcy. His whole strength is already absorbed in the performance of the necessary functions of life, frequently carried on imperfectly. His digestion is weak, his bowels may be disordered, sleep is restless and disturbed there is a waste of tissue owing to the fever, and his muscular power is impaired to such a degree that a short walk or a small amount of physical exercise saps his strength, and may wholly disable him. Yet strange and paradoxical as it seems, weak as he is,

[1] By apparently cured is meant when the rational signs of the disease and the bacilli have been absent for at least three months. I think it is but reasonable to assume that such cases are cured.

he persists in the belief that exercise is the one thing needful for his restoration. This feeling is not confined to consumptives, but lives in behest of a strong public sentiment. It is builded on the knowledge that in health exercise gives strength. But what an enormous difference between the body in a normal state, and when suffering from a chronic wasting disease like consumption! The two conditions may be illustrated by comparing a business man who is threatened with insolvency with one whose credit is good. If the former pays out as much as he takes in, his finances will always be in a crippled state, and he will be in constant danger of going to the wall; but if he halts—that is, if he diminishes his expenses and maintains or increases his income—his capital will accumulate, and in time he will be able to compete with other capitalists. But the business man whose credit is unimpaired goes on and invests all his surplus capital—that is, he exercises his financial strength to the utmost limit of prudence—and thereby enhances and improves the integrity of the institution which he represents. So it is with the taking of exercises. If this is to be beneficial, a certain amount of strength must be possessed by the individual before he begins it, and by putting this strength to proper use it will grow and accumulate; but he who has no, or very little strength at the outset, must reduce his expenditures, or his waste, and enlarge his income, or else go into physiological bankruptcy. We must realize that with the consumptive, it is wholly a question of constitutional resistance; that when he is weak the disease is strong and advances; that when he is strong the disease is weak and recedes; and that the force which he expends in performing exercise deducts so much from his total vitality, and allows so much less for the body to cope against the disease, and to perform the essential functions of life.

Moreover, there is a perfect agreement in these institutions in regard to the great utility of supplying nutritious food in the most concentrated form; of reducing high temperature with antipyrin, phenacetin, and antifebrin; of checking the waste which is occasioned by cough, expectoration, sweats, and diarrhœa; of employing pneumatic and climatic treatment; and in fact of everything which goes to enhance the vigor and vitality of the body.

I think I am justified in saying that hard, cold, positive facts are the best crucial tests to which a theory can be submitted in order to ascertain its correctness. The specific cure for consumption is utterly condemned, when compared with the general treatment of this disease on such a basis. How would mercury rank as a specific in syphilis, or quinine in ague, if their curative results were as hapless as those of tuberculin? Even if a specific cure for consumption were possible, it is difficult to see its need in view of the large number of cures, as I have shown, are annually made by other means. From my own personal experience, I can testify that there is no chronic disease which responds more readily and more promptly to persistent and well directed general treatment than pulmonary consumption; and there is no reason to doubt that with the advance of the scientific study of the disease the percentage of cures will increase. A specific cure for consumption is not of so much consideration now as a study and a development of the lines of treatment which have been shown to hold out such a magnificent measure of enduring success.

One more thought and I am done. Ever since the failure of tuberculin became generally palpable, there arose a feeling in the minds of many of his followers, that Dr. Koch had made a serious mistake in the practical application of his theory, and that eventually great therapeutic results are bound to flow from it. Dr. Koch is not in error, but is more consistent than many of his disciples who follow him in the distance. He has a logical belief in his theory, and knows what the practical application of tuberculin implies better than any other living being. There cannot be the least question concerning his ability to cure by inoculation, the disease which he artificially induced in animals; and if consumption in man were caused through contagion or inoculation, or was of the same nature as the disease which he produced in animals, it would be perfectly reasonable to hope that he could cure the consumption in the human family. But the disparity which exists between that which *is* and that which *seems*, is a vortex which has stranded and annihilated many an idea. This is not the first time that the contagion theory of consumption has come to grief. A century ago the government of Naples concluded that consumption was an infectious disease, and practised the most rigorous isolation of those who suffered from this disease, for more than fifty years. The results were abominable. Reliable historians inform us that besides causing untold misery, these laws were not

of the slightest service in diminishing the death rate from this disease.

Should we not profit by these dearly bought experiences? Is it not high time that we take an account of our bearings and begin to recognize that he who hugs the delusion that consumption will be cured or prevented through the miraculous operation of some anti-bacillary agent or process, will only live to reap "from the hopes which around him he sows, a harvest of barren regrets?"

THE ELECTRICAL TREATMENT OF FIBROID TUMORS—WITH AN ANALYSIS OF FORTY-SIX CASES. *

BY G. BETTON MASSEY, M D.,

PHILADELPHIA.

The progress of the Apostoli method of treating fibroid tumors of the uterus presents both analogies and contrasts to those of some of the recent theapeutic claims that have been widely investigated by the medical world. Recognized at last owing to the persistent agitation of its originator, it was, like the Brown-Séquard and Koch remedies, enthusiastically adopted by those pioneer advocates who often make up for crudeness of training and inexactness of observation by a debt of stimulated progress laid upon subsequent workers. In contrast to the theories alluded to, it has since borne the test of capable experiment to an extent that even exceeds the original claims, and with the broadened use of electricity in other allied conditions, has made a new departure in gynæcology. Unlike them, also, it has encountered an opposition of unparallelled fierceness, an opposition, nevertheless, that has been as healthy as it has been fierce. The cause of this unusual attitude towards a new remedy is easily seen in the recent extension of abdominal surgery, and this highly favored disease has heretofore been treated to a rivalry of methods that cannot be other than productive of the best results. Far from regretting this rivalry, I indeed point to it as an important index of medical development, and cannot but regret that other therapeutic efforts now blindly accepted are not subjected to similar tests. I do regret the intemperate statements of certain extreme opponents. Undermined in their wholesale and indiscriminate resort to dangerous operations by the attention bestowed upon a milder and non-dangerous method of enforced atrophy, they have been invariably the aggressors in controversy, condemning in unmeasured terms a method of which they knew nothing. This is in striking contrast to the position of electro-therapeutists, who willingly concede to surgery certain cases unsuited to electrical treatment yet demanding active help.

Experience is alone the final arbiter, and in view of the many cases of symptomatic cure and reduction, and the considerable number of those who that have disappeared under electrical treatment, now on record, it is in order for those who advocate an exclusively surgical treatment to come forward, not with wet specimens just removed from patients who may die subsequently, nor even mere reports of recoveries and deaths from the operations, but with full reports of the ultimate results in each case that withstood the operation of oophorectomy and hysterectomy. The profession is not simply interested in the average mortality of these operations for comparatively benign tumors, but wishes to know also the results in the restoration of health and comfort to these patients. For instance, some careful operator should tell us how often removal of the appendages for bleeding myomas fail to control the hæmorrhages; how often this procedure in patients approaching the menopause is followed by mental disturbance; how often a successful hysterectomy is followed by abdominal fistulas, intestinal adhesions, hernias and other sequelæ that are as troublesome and painful to the patient as the benign tumor itself had been. Until such statistics are collected there can be no true comparison of surgical and electrical methods, as the latter refer only to results that are always more or less remote from the remedial procedures.

As an illustration of the results of electrical treatment of these growths I have analysed the histories of forty-six cases treated consecutively by myself, in which I have considered the conditions present at the beginning of treatment, the nature of the treatment, and the results as ascertained at various periods after the cessation of treatment.

A study of these cases will show that seven cases should be eliminated from consideration in this paper because two were polypoid and their delivery per vaginam was merely assisted by the electrical applications made, and five were treated for so short a time or were so soon lost sight of that it is impossible to use them in demonstration.

This leaves thirty-nine cases that had more or less thorough treatment and in which the results have been ascertainable. These are

* Read in the Obstetrical Section, American Med. Assoc., May 7, 1891.

divisible into five classes in the matter of results attained:

Class I. Cases of complete anatomical and symptomatic cure, the tumors disappearing and the patient being restored to health. Of this class there were five cases.

Class II. Cases in which the tumor was considerably diminished in size and all other symptoms were cured. Of this class there were twenty-three.

Class III. Cases in which the tumor was not diminished in size but all the symptoms were relieved, or in which the tumor was reduced but the symptoms were not relieved. Of this class there were eight.

Class IV. Cases in which the tumors were not diminished nor the symptoms relieved. Of this class there were two.

Class V. Cases made worse by the treatment. Of this class there was but one.

PERCENTAGES.

Based upon the thirty-nine cases of thorough treatment, therefore, it will be seen that 12.8 per cent. resulted in a complete cure and disappearance of tumor; 79.4 per cent. in symptomatic cure with or without reduction in size; 5.3 per cent. were unaffected; and 2.5 per cent. were made worse. Omitting the case that was made worse since it was fibro-cystic and should not have been treated, the successes amount to 95 per cent. and the failures to five.

The prevalence of the several varieties of tumor in the series is shown in the following table:

	Intra-mural.	Intra-mural. and sub-peritoneal.	Subperitoneal.	Submucous
I. Complete disappearance	5			
II. Symptomatic cure and reduction.	15	3	4	1
III. Symptomatic relief without reduction.	6	1		1
IV. Unaffected by treatment.			2	
V. Made worse.				1

THE FAILURES.

Of the two cases unaffected by the treatment, one was that of a patient who had two painless, movable, subperitoneal growths attached to the uterus by long pedicles. There was absolutely no symptom whatever of these tumors, beyond the mere fact of their physical presence, and as they were not situated favorably for electro-puncture and were giving no trouble anyway they were left alone, after a thorough trial of mild intra-uterine applications. No. 33 was a large, kidney-shaped subperitoneal tumor attached to the anterior surface of the uterus and lying between the latter organ and the bladder. As the bladder was spread out in front of it, preventing puncture, resort was had to long continued vaginal galvanic alternatives. Under these the tumor was released from the pelvis, but the patient was not sure that she felt any better.

The case made worse was No. 3, a large intra-uterine fibrocyst which was treated before it was pointed out by Apostoli that this form was liable to be made worse by electricity. The death from septicæmia did not occur until sometime after the cessation of treatment and during attempts to extract the mass surgically by piece meal. The case resembled closely the one described by Emmett at page 587, of his work on the Diseases of Women, in which it is stated that death also occurred during attempts at extraction. Though sent to me by an expert surgeon my own case would have been far better treated by hysterectomy than by any form of electricity.

METHODS.

It will be noticed that six cases were treated by puncture. The greater number of these punctures were of the kind that has been designated as "buried"—a variety of puncture that was originated by myself, and one that I think more powerful and safer than that described by Apostoli. Unlike the Apostoli needle, which is only insulated by a movable sheath up to the point at which the puncture is made, my own needle is insulated by vulcanized rubber to within one centimeter of the end, with a view of preserving the track made by it through healthy tissue from an electrolytic softening that would prevent immediate union. Punctures made in this way have been proven by me to heal in three days in spite of the use of 150 ma. at the point within the fibroid tissue, while the older form of puncture usually remains unhealed for a week or more.

No unpleasant reactions followed any of the punctures, which were sometimes exceeding an inch in depth, and while I do not think that any but those skilled in it should attempt this method, I do not hesitate to employ it myself in those rare cases that are adapted to it. None of the cases in which the tumors disappeared were punctured, but this was merely because their intra-mural situation neither required nor permitted it.

The intra-uterine method is certainly the method of choice, and with gentleness, and especially the use when possible of the

elastic electrode devised by me, is free from risk in all cases except those complicated by acute inflammatory conditions. I have been disposed of late to increase the intervals between these applications to five or more days, interspersing one or more vagino-abdominal treatments for their contracting effect.

The vagino-abdominal galvanic alternatives that have been advocated by Danion of Paris have a considerable value when neither of the two better methods are available. I have seen reduction occur during the use of this method in several cases, and can testify to its power over inflammatory conditions in the pelvis.

As will be seen from the notes of some of the cases, persistent treatment has at times, been the keynote of success, though the best results were often attained in a short time.

Society Reports.

NEW YORK NEUROLOGICAL SOCIETY.

Meeting of May 5th, 1891.

The President, Dr. L. C. Gray, in the Chair.

The Back in Railway Spine.—Dr. F. X. Dercum, of Philadelphia, read a paper with this title. He said that it seemed to him in discussing railway injuries, the physical condition of the back had not been sufficiently dwelt upon. It was certain that more had been said pro and con upon injuries of the spinal contents, and far more still upon the subject of traumatic neuroses. It had been the speaker's fortune to examine a large number of railway and allied injuries, and it had appeared to him, that the condition of the back was often poorly understood and often unappreciated, while important points were sometimes entirely overlooked. Further conditions were occasionally observed which were difficult of explanation, and it was to these he wished to call attention. It was well known that pain of various kinds was met with in railway cases, but he wanted to exclude from the discussion all pains, the existence of which could not be confirmed by any physical evidence and which rested solely upon the unsupported statements of the patient. On the other hand all pain, signs of which were evoked without previous warning or suggestion should be rigidly admitted. He strongly advised the thorough examination of all such patients by superficial and deep pressure and by blows, as by this means information of decided character, might be gained in cases otherwise obscure. Another important method of test was by motion. In regard to pain elicited by voluntary motion, the objection might be urged that here an opportunity was presented to the malingerer. There were, however, so many other means of ascertaining the truth that difficulty in arriving at definite conclusions would rarely be experienced. Much depended upon the manner in which the various tests for motion were applied. These tests consisted of flexion forwards, lateral flexion, torsion and transmitted shock. Having first practiced palpation and pressure, and gleaned such information as could be obtained from these sources, with the patient standing before us the back should be closely inspected. Following this the tests for motion should be gone through. After having briefly considered the various tests for eliciting pain, he said that not only was it possible with due care to settle the question of the genuineness of the symptoms by any one of the methods detailed, but it was also evident that there must be a general correspondence in the results of all the methods. We should expect for instance that the area of pain upon deep pressure would correspond, other things being equal, to the area of pain on motion, or that the region of pain elicited by percussion would correspond to the region of pain elicited by transmitted shock. The speaker then detailed the histories of six cases bearing upon the question. The various symptoms presented by these cases could be conveniently grouped as follows: first, those due to the physical condition of the back; secondly, the symptoms of functional derangements and asthenia; and, thirdly, those that presented psychic and hysterical symptoms. To the first group belonged: first, pain on deep pressure; secondly, pain on motion and transmitted shock; thirdly, muscular spasm and rigidity; fourthly, muscular weakness. Now the pain elicited by pressure, motion, or shock, was evidently the result of a deep seated injury, either to the ligaments of the spinal column, or to the muscles, probably to both. Practically, it was impossible to differentiate between the two, nor was it important to do so. To muscular spasm and rigidity were to be assigned the same value which was assigned to the muscular spasm observed in a sprained, dislocated or broken limb. The muscular weakness resulting occasionally in lordosis, was to be ascribed to the general weakness resulting from the shock, and also to the direct effect of the trauma upon the muscles themselves. To

the group of symptoms of functional derangements and asthenia, belonged the various symptoms of general weakness, both mental and physical, tremor, sweating, inability to properly expel or to retain the urine, etc. To the group of psychic and hysterical symptoms was relegated the hypochondriæ, the night horrors and the convulsions. One important problem, however, still presented itself, and that was why it was that some of these cases did not attain their maximum severity for days and weeks after the accident. It was thought exceedingly probable that there was a direct extension of inflammation from the original site of the trauma along the sheaths and tendons of the muscles. It was difficult to escape from this inference, inasmuch as there was a marked spread in the area of pain on deep pressure. Hand in hand with this, there was, beyond doubt, a radiation in the muscular spasm, a radiation too which might reach not only muscles immediately adjacent, but those even relatively remote, such as muscles of the abdomen or of the shoulder. As to the question of duration of the symptoms it was impossible to give a definite answer. It was a question of probability, and of degree, and therefore one in which legitimate differences of opinion might obtain; however, taking the cases the speaker had seen, it was evident that chronocity must be admitted as established beyond cavil. In regard to the disappearance of so-called "litigation symptoms" made so much of by Page and others, the speaker's observations had been that when a claim for damages had been settled, the mental condition improved very much. A man who perhaps was poor, was suddenly raised to a condition of relative wealth. No wonder that hypochondria often disappeared and was replaced by buoyancy and exhaltation, it would be strange indeed if it were otherwise. After a while, however, he had seen the old mental condition partly re-establish itself, while the physical condition had undergone no change save that which could be accounted for by the slow repair of time. Lastly, the cases which had been presented were selected because of the marked and pronounced condition of the back. He did not wish to create the impression that every case should present the back symptoms to an equal degree in order to be considered genuine. As a matter of fact, in a large number of instances of *bona fide* railway back, the symptoms were far less evident than is the cases detailed. Finally he repeated that careful application of the various tests for eliciting pain and spasm could not fail to evoke a reply if trauma be really present.

Dr. G. M. Hammond called attention to a train of similar symptoms to those described by Dr. Dercum to be found in a modified form among athletes. This was especially the case with those who practiced jumping and running. He had seen several instances in which the patients complained of pain in the back and deep seated pain on pressure, and on stooping forward. There would also be exaggerated reflexes. These symptoms would persist for months while the individual was practicing his exercises. In jumping the foot struck the ground in the take-off with considerable force. In running long distances the repeated jar from the foot striking the ground would be transmitted to the spinal cord. Indeed it was his opinion that the symptoms he had met with were due to long continued transmitted concussion to the cord. After examining a great number of athletes he had invariably found that the knee-jerk was exaggerated, particularly among those who ran and walked.

Dr. E. C. Spitzka referred to some practical features of the paper and particularly to the tests used to locate the sprain. Conclusions drawn from a large number of cases were contradictory and the matter to a certain extent still obscure. Lateral flexion and torsion and transmitted concussion were of the utmost value. Within a year the speaker had seen one case of almost fatal collapse from severe transmitted concussion. The spinal deformity was often very slight and escaped observation while producing serious nervous symptoms due to slow hypertrophic changes.

Dr. A. D. Rockwell said that concussion of all kinds might be immediately followed by complete paralysis. When he was surgeon in the United States Cavalry in the late war, one of the men was injured while his horse was jumping a ditch. There was complete paralysis at once, the man being carried for several days in an ambulance. Partial recovery gradually took place. The speaker saw the man again a short time ago learning that he had always been more or less of an invalid, suffering from pain in the spine on pressure, melancholia and neuralgic symptoms. This condition had been present ever since the time of the injury. As to the treatment of cases such as the author had described he thought that the

actual cautery when properly applied gave the best results. He had used it in the instance narrated with direct benefit.

Dr. Dercum thought the tendency was to look for some other cause for these symptoms, other than the right one. If the physician would examine the spinal columns more carefully in patients complaining of the symptoms he had described diagnostic points would usually be determined.

Selected Formulæ.

FORMULA FOR WHOOPING COUGH.

Talamon, in the *Méd. Moderne*, gives the following formula for whooping cough:

℞

Terpini hydrati	1.0-1.5 grammes
Antipyrini	1.0 gramme
Syr. aurant. cork	50.0 grammes
Aquæ Tiliæ	60.0 grammes

M. et. Sig. One-half to one teaspoonful frequently during the day, for a child from one to four years of age.

ANTI-DYSPEPTIC POWDER.

Dujardin-Beaumetz, in the *Union Méd.*, gives the following formula, which he calls an "anti-dyspeptic" powder:

℞

Magn. sulph.	
Cret. præpar.	
Calc. phosphor. aa	10.0 grammes

M. et. div. in chart No. xl.
Sig. One powder before meals.

NITRATE OF SILVER IN CATARRHAL ICTERUS.

Dr. Niecechi, in *Medicina*, claims that nitrate of silver is specific in catarrhal icterus, checking all symptoms immediately. He gives the following formula:

℞

Arg. nitr.	0.06 gramme
Aquæ dest.	180.00 grammes

Sig. One tablespoonful three or four times a day. The dose may be repeated if not efficaceous. A rigorous anti-catarrhal diet should be enforced.

SUMMER DIARRHŒA.

℞

Resorcin	gr. iss,—gr. iij
Infus. chamomil.	ounces ij
Tr. opii	gtt. ij
Tr. cascarill	gtt. xv

M. Sig. Teaspoonful every two hours.

—*Kinder-Arzt.*

PILLS FOR DYSENTERY.

The following pills used in the treatment of dysentery have given satisfactory results:

℞

Powdered ipecac	gr. iv
Calomel	gr. jss
Extract of opium	gr. j

Make into three pills, and give one each hour, in the treatment of diarrhœa or dysentery due to exposure to heat.

—*Medical News.*

APHRODISIAC PILLS.

According to the *Journal de Médecine de Paris*, Lutaud employs the following for the purpose of producing sexual stimulation:

℞

Powdered nux vomica	¾ grain
Bromide of iron	15 grains
Phosphorus	⅛ grain
Excipient a sufficient quantity.	

Make into twenty pills and take one each night.

In addition to this treatment the patient should resort to hot and cold douches and gymnastic exercise, massage, and systemic tonics, and frequently coca will be found of value, as in the opinion of Lutaud this drug possesses very distinct aphrodisiac powers.

SALICYLATE OF MERCURY.

This remedy is one which has been largely neglected, despite the fact that it is useful to a high degree. One of the great drawbacks which attended its use was the impossibility of dissolving it in water without the addition of alcohol or of chloride of sodium. Otherwise this salt has antiseptic powers equal to corrosive sublimate, and is devoid of the latter's bad qualities. M. Vacher has overcome the difficulty of making a solution (*Medicine Moderne*) by obtaining salicylate of mercury through the double decomposition of a mixture of corrosive sublimate and salicylate of soda in water. In addition to the salicylate of mercury, a chloride of sodium is formed which makes the solution a stable one. This solution is not irritating, contains no alcohol, and may be used for various purposes according to its strength.

For external use the following formula may be employed:

℞

Hydrarg. bichlorid	gr. iv
Sodii salicylat.	gr. viij
Aquæ	oz. viij M.

If a weaker solution is desired, the following way be ordered:

℞

Hydrarg. bichlorid	gr. j
Sodii salicylat.	gr. ij
Aquæ	oz. x M.

For hypodermic injections in the treatment of syphilis, M. Vacher injects one cubic centimeter of the following solution, which has given him the best results:

℞

Hydrarg. bichlorid	gr. v
Sodii salicylat.	gr. x
Aquæ destillat.	oz. j M.

One cubic centimeter contains three-twentieths of a grain of salicylate of mercury. The injection is not painful, and is never followed by abscess. Internally, a table-

spoonful, or slightly more, of a one to a thousand solution may be administered.—*St. Louis Med. and Surg. Journal.*

OINTMENT FOR ECZEMA.

℞

Thymol	30 grains
Oxide of zinc, Starch, Lard, of each	6 drachms
	1½ ounce

Apply twice a day to the affected part.

—*Journ. de Méd. de Paris.*

WHOOPING COUGH.

For use at time of the paroxysm, Wilde recommends the following mixture, a teaspoonful of which is to be poured upon a compress and cautiously held near the child's mouth:

℞

Chloroformi	f 3 j
Æther. sulphuric. purif	f. 3 ij
Ess. terebinthinæ rect	f. 3. iiss

—*M' Union Médicale.*

FOR EXTERNAL HÆMORRHOIDS.

Washing them with a solution of corrosive sublimate the strength of 1 to 1,000 or of carbolic acid, 1 to 50. After this the following salve may be applied:

℞

Iodoform	grs. v
Extract of belladonna	grs. viij
Vaseline	3 j

SUBINVOLUTION OF THE UTERUS.

Professor Barton Cook Hirst, of the University of Pennsylvania, recently gave the following as the best combination to use:

℞

Strychninæ sulphatis	gr. 1-20
Quininæ sulphatis	gr. ij
Extract ergotæ	gr. j

M. ft. pil. No. 1.
Sig.—At one dose. To be repeated thrice daily.

UTERINE WAFERS.

℞

Hydrarg bichlor	gr. 1-16
Sulphate zinc	grs. v
Sub nit. bismuth	grs. xv
Pulv. gum arabic	grs. v
Carbolic acid	grs. iij

M. Pulverize the zinc; then add the rest of the ingredients, with q. s. water to make into a conical shape for a vaginal suppository.

This formula is offered to the profession as practically duplicating the Micajah medicated wafers. This formula, with the exception of the bismuth and acacia, has been used by the medical profession for a long time for onychia, etc. U. S. Dispensatory, 12th edition, Wood & Bache, page 1,115; used by Drs. Perkins and Physick.

TREATMENT OF BALANITIS.

Dr. W. R. Chichester states that he has obtained good results from the employment of the following (*Med. Rec.*):

℞

Atropiæ sulphatis	gr. i
Zinci sulphatis	gr. ij
Acid. boracic	gr. v
Aquæ destillat	3 j

M. Sig. Ayply two or three times a day with a brush.

He further states that this is open to any modification which the case suggests.

OX-GALL.

The following prescriptions containing ox-gall are recommended:

℞

Fellis bovis purificati, Magnesii carbonatis,	aa c.
Ol. menth. pip.,	mj.

M. et ft. capsulæ No, xx. Sig., a pill three or four times a day, after meals. Use in dyspepsia and constipation.

℞

Fellis bovis purificati	5j
Ext. nucis vomicæ	gr. j
Aloini	gr. j
Ol. cinnamomi	mj

M. et ft. pil. No. xx. Sig., two pills between meals. Serviceable in torpor of the liver and in dyspepsia.

—*Med. Rec.*

INFANTILE CONVULSIONS.

℞

Choral hydratis	gr. iv
Potassii bromidi	gr. viij
Aquæ	
Syrupi aa	dr. j

M. Sig. One dose for a child æt. two.

—*Jacobi.*

℞

Pepsinæ	gr. xii to xxiv
Hydrarg. chlor. mit	gr. ss to j
Sacch. lactis	q. s.

M. et ft. chart. No. xii.
Sig. One powder every three hours after nursing.

℞

Ex. Pancreatis	5ss to j
Hydrarg chlor. mit	gr. ss. to j
Sacch. lactis	q. s.

M. et. ft. chart. No. xii.
Sig. One powder every three hours immediately before or after nursing.

—*Annals Gynæcology and Pædiatrics.*

TREATMENT OF WHOOPING COUGH.

Löffler recommends the following solution to be used in the treatment of whooping cough:

℞

Freshly prepared chloride of silver	1½ grain
Water	2 pints
Hyposulphite of Sodium, a saturated solution.	

Use by an atomizer, the liquid being directed into the pharynx. Repeat the application every two or three hours. This treatment is both prophylactic and curative.

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EDITOR AND MANAGER.

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Make as few paragraphs as possible. Punctuate carefully. Do not abbreviate or omit words like "the" and "a," or "an."

Make communications as short as possible.

NEVER ROLL A MANUSCRIPT! Try to get an envelope or wrapper which will fit it.

When it is desired to call our attention to something in a newspaper, mark the passage boldly with a colored pencil, and write on the wrapper "Marked copy." Unless this is done, newspapers are not looked at.

The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

INTRA-UTERINE STEM PESSARY.

During the past few years, very little has appeared in current literature concerning the intra-uterine stem pessary, and it is evident that its use is being more and more restricted. Not many years ago the stem pessary was regarded as an indispensable instrument in the treatment of certain forms of flexions and versions of the uterus. Now, it is equally true that to most of the present generation the instrument is known only by having seen a cut of it in a text-book. Introduced and abandoned by Velpeau, reintroduced and abandoned by Amusat, it was forced upon the notice of the profession by Simpson, in 1848. For twenty years it was lauded or condemned by gynecologists of prominence, but gradually experience in its use, and new discoveries in pathology have limited its field of application and demonstrated the dangers arising from its employment. Views upon the pathology of flexions have undergone a revolution, and the consensus of opinion to-day excludes the stem pessary in the treatment of flexions and versions.

In the treatment of atrophy of the uterus, and of the so-called infantile, or poorly developed uterus, with or without flexion, the use of the stem pessary, in connection with dilitation of the cervix, has its advocates. The stem pessary is advised also, especially by Wylie, to keep the cervix patulus after dilatation, and for the purpose of drainage. But inasmuch as the necessity for this procedure is felt only by a decided minority of operators, it may be assumed with safety that its omission would be a small loss.

Practically the stem pessary is used to-day for the treatment of the so-called infantile uterus, and of super-involution of the uterus —a very restricted field. The prognosis of super-involution of the uterus is notoriously bad; and when improvement does take place, it is usually but temporary. It is an open question as to whether super-involution of

the uterus is not equivalent to an early menopause. The infantile uterus is the result, as a rule, of a partial development of the sexual organs, and accompanies small ovaries—not infrequently cystic or cirrhotic—and small tubes. Menstruation in such cases is absent or imperfect. The reason why treatment directed to the uterus in such cases yield poor results is not far to seek. When, fortunately, the partial development is confined to the cervix or even to the uterus, and the tubes and ovaries are more perfectly developed, the prognosis is better. But in this field the stem pessary comes in competition with dilitation of the cervix, the use of electricity, and roborant medication combined with judicious exercise. It seems probable that the intra-uterine stem will continue to be used in certain cases of imperfect development of the sexual organs, not so much because of the positive good which its use will accomplish, but because this condition, when marked, is very rebellious to all treatment, and such unfortunate patients, especially when desirous of marriage, will demand that everything offering a reasonable hope of benefit shall be employed. But the practioner must remember the teachings of the past, and warn his patient of the danger of salpingitis and peritonitis from the use of the stem; and be prepared at any time to see the poor prospect for sexual develpment, previously possessed by his patient, absolutely destroyed by the occurrence of serious pelvic inflammation.

Correspondence.

Our Inadequate Hospital Facilities for the Management of Mild Cases of Contageous Diseases.

To the Editor of the Medical and Surgical Reporter.

Dear Sir:—I desire to relate a recent experience, not with the intention of fault-finding, but rather with the hope that benefit may result from its consideration.

On Thursday, May 14, I was called to see a servant girl, Kate M., who, I was informed had been ailing since the previous Tuesday evening. Upon examination I found her to be suffering from a well-marked follicular tonsillitis, this being the eighth case of the kind I had seen in our square during the week. As she did not properly carry out the measures I suggested, and was rather troublesome to wait upon, the family, by whom she was employed, desired her removal. I accordingly arranged to have her admitted to the Philadelphia Hospital, as she said she could not afford to pay board anywhere.

Just as she was about to start for the Hospital, however, I detected for the first time, a profuse rash over her neck, breast, arms, legs and slightly on her face. There was no exacerbation of general symptoms, and my knowledge of her condition for the previous two days enabled me to conclude promptly that the eruption was not due to scarlet fever but to Rötheln. I so pronounced it, and had her conveyed, in the carriage hired by her friends, to the Philadelphia Hospital.

Upon arriving there she was refused admittance because of the contagious nature of her disease. Not having any place to go she had the driver bring her to my office for advice. Thinking it probable that a mistake in diagnosis had been made and scarlet fever suspected from the combination of sore throat and a rash, which certainly resembles the eruption of scarlet fever at times, I decided to accompany the girl to the Hospital, to make explanation, and accordingly had her taken there for the second time. Unfortunately the Hospital officials informed me that they could not receive a case of Rötheln and that the proper place for such a patient was the Municipal Hospital. We then proceeded to that institution where she was received and placed in a vacant ward, as I was particularly anxious that she should not contract a trouble more serious in nature than the one she had upon entering. After the arrival of the physician of the institution, after my departure, the case was diagnosticated as scarlet fever, and she was placed in a ward with some patients who were convalescing from that disease. These facts I learned upon visiting her on Monday morning, about 36 hours after her admission to the Hospital. Examining her at this time I found her throat decidedly improved, no secretion in the follicles of the tonsils and the inflammatory action greatly subdued. The rash had disappeared. Temperature was 98° F., having rapidly come down from 102° F., which

was the record upon admission, and which I am quite sure was largely due to nervousness, as her temperature had been normal that morning.

So much was I impressed with the correctness of my original diagnosis, and so greatly did I feel the dangers she incurred from contact with her contagious surroundings, that I called upon the physician in charge of the Hospital and asked if she could not be removed to safer quarters. I was informed that even granting a mistake had been made by him in the diagnosis of the case it was not possible to do any better for the girl than keep her where she had been placed, that they did not have any room where cases of such mild contagion could be separately cared for, and that the nurse who would be obliged to wait upon her, had charge of cases of scarlet fever and diptheria; and finally that as long as she had been for over 24 hours in the scarlet fever ward, she would not be apt to escape that disease by removal from the ward.

Whether this particular case is one of Rötheln or of scarlet fever matters little as far as my purpose in this communication is concerned. While freely admitting my liability to err in diagnosis, I, however, feel justified in holding my original opinion respecting the nature of this girl's illness, and I also greatly fear that she will be the victim of a much more serious malady, due to her incarceration in a room poisoned by scarlet fever patients. Several questions have presented themselves as a result of this experience:

1st. Is it just to Philadelphia citizens that the city's Hospital for contagious diseases should have no ward or wards set apart for the reception of contagious diseases of such a mild character as Rötheln, when patients may be cared for by nurses not on duty amongst cases of a more serious character?

2nd. Is it just to the physicians who may be obliged to do as I did and allow their patients to run the risk of contracting a more serious affection in the place they are confined for safety?

3d. Might not a physican be caused much annoyance if a patient felt disposed to prosecute him in case a more serious disease were contracted while at the Hospital?

It would seem that the claims of economy would demand better facilities for the management of the mild contagious diseases at the municipal Hospital, when we consider the relatively greater period of time patients must be boarded when afflicted with a grave disease. Certain it is that the claims of humanity demand such attention.

Respectfully,

Wm. A. Carey,
1947 North 18th Street.

Ed. Medical and Surgical Reporter.

Dear Sir:—Will you or some of your readers please give through the columns of your valuable journal, a remedy, or remedies to allay the itching following the hypodermic use of morphia, and oblige. Yours,

R. C. Spear, M. D.,
Mt. Gilead, O.

Ed. Medical and Surgical Reporter.

Dear Sir:—Speaking of Hydrogen Peroxide; I used it recently to wash out a foul suppurating abscess in the roof of the vagina, after previously cleansing it with a bichloride solution. The abscess held about half a teacupful of pus, and had been existent for twenty years. Result was complete cure after one application.

Wm. H. Burr, M. D.,
Wilmington, Del.

Book Reviews.

BLAKISTON'S QUIZ COMPENDS. A COMPEND OF DISEASES OF CHILDREN, ESPECIALLY ADAPTED FOR THE USE OF MEDICAL STUDENTS. By Marcus P. Hatfeild, A. M., M. D., Professor of Diseases of Children, Chicago Med. College, etc. One colored plate. Phila., 1890.

This epitome of the diseases of children consists of the condensed annual course of lectures delivered at the Chicago Medical College by the author. The lectures in turn, the author states in his preface, were founded upon Dr. Ernst Kormann's "Compendium der Kinderkrankheiten," which was translated by him in coöperation with Dr. E. J. Doering, at the University of Berlin. The frontispiece consists of a very good colored diagramatic sketch of the fœtal circulation, which is a wise provision in a book intended "especially for the use of medical students." We believe the book is admirably suited to the requirements of students, being clearly written, and consisting chiefly of definitions and short explanatory passages. This arrangement enables the small size so valuable in a quiz-compend, while allowing the work to embrace all of the chief affections of childhood. It is an excellent synopsis of the diseases of children and as such we commend it to the students for whom it is intended.

ORIGIN, PURPOSE AND DESTINY OF MAN OR PHILOSOPHY OF THE THREE ETHERS. By William Thornton. Boston. Published by the author, 1891.

In this little book of one hundred pages, the author continues the thoughts expressed in his "Rationalism in Medicine" published in 1885. This philosophical essay will not be of any use to the busy practitioner of modern medicine, since one of the conclusions reached, is, that all drugs now commonly administered are positively harmful to the organism, since according to the theory advanced by the writer, nothing should be given in disease except those substances which are normally found in the body. To those who are interested in philosophy, especially as it bears upon the science of medicine, this volume will be found worth a careful reading, particularly the chapters devoted to the "philosophy of the three ethers" and "how to make medicine a science." In fact the whole essay is written in graceful language, and the theories of which the author treats and applies to medical science, are extremely enticing. The writer also devotes a chapter to the subject of the immortality of the *Life*, which his philosophy separates from its "material environment." To thoroughly appreciate the *idea* of the book, it must be carefully perused, since space will not here permit even a clear synopsis of thought advanced.

KOCH'S METHOD TO CURE TUBERCULOSIS, POPULARLY TREATED BY DR. MAX BIRNBAUM. Translated from the German by Dr. Fr. Brendecke. Milwaukee, Haferkorn, 1891, pp. 95.

This brochure consists for the greater part of a popular résumé of our knowledge of the tubercular process in its various manifestations; its consideration of Koch's method of treatment is limited to the republication of Koch's first communication in the medical papers. There is little in the pamphlet that is not much better treated elsewhere; and the success of the translation is extremely doubtful from an English point of view, the failure to dispose of the many Germanisms rendering the text rather unpleasant to readers unaccustomed to such idioms.

Considered as a medical work it is worthless because of the unsoundness of many of its statements and the brevity of the consideration of important points. As a popular presentation of tuberculosis, it is about what might be expected from a writer who confounds lupus with ring-worm, as is repeatedly done in its pages. As a review of Koch's work in the treatment of the tubercular process, there is everything to desire, little or nothing to be found, as the pamphlet was published before Prof. Koch had announced the character of the matter he employs and its manner of manufacture.

PERISCOPE.

THERAPEUTICS.

THE THERAPEUTIC VALUE OF CETRARIN.

Cetrarin is the name which has been given to the active principle of Iceland Moss. The drug is one having several valuable therapeutic properties. Recent experiments show that it stimulates the stomach and also the intestinal peristalsis, it also increases the number of both red and white corpuscles in cases of anæmia, and, finally, acts as a tonic to the nervous system. Kobert, in the *Journal de Méd. de Paris*, April 19, 1891, states that he has found cetrarin of great value in cases of chlor-anæmia complicated with constipation and loss of appetite. The dose employed was 10 centigramme in any convenient vehicles.

SOZOIODOL.

The comparatively new antiseptic, Sozoiodol has already been brought to the notice of the readers of The Reporter some time ago. It will be remembered that its chemical name is bi-iodo-para-phenyl-sulphuric acid. It is obtained by the action of fuming sulphuric acid on bi-iodide of benzine, which is saturated with carbonate of lead and filtered. The lead salt is decomposed from the mixture by sulphuretted hydrogen, and the aqueous solution allowed to evaporate. The crystals which are then formed are those of Sozoidol. The preparation contains 42% of iodine.

Recent investigations have confirmed the valuable antiseptic properties of this drug. It is similar, yet in many ways far superior to iodoform. Its odor is not unpleasant, and its healing properties more marked. Its action in tuberculous or scrofulous ulcerations is excellent, and it has been used with success in both gonorrhœa and syphilitic sores of the generative organs. A rapid curative action has also been seen to follow its use in various chronic cutaneous affections, in ozena, and in laryngitis. As in antiseptic in surgery, it is very useful,

promoting rapid healing, and keeping the parts free from infection. It may be advantageously dispensed in connection with starch, vaseline, or cerate.—*Journal de Méd. de Paris*, April 19, 1891.

TREATMENT FOR VARICOSE LEG-ULCERS.

Basing his opinion upon numerous experiments and a large number of successful cases, Dr. J. Braun, in the *Allgemeine Med. Central-Zeitung*, May 6, 1891, advocates most highly the treatment of leg ulcers with the following formula:

℞ Zinci oxyd..... 15.0 grammes
Lanolini.....100.0 "
Unguent. moll..... 40.0 "
M.

The ulcer should first be carefully washed and dried and the above salve, thickly spread upon a piece of linen, applied, and covered with a light bandage. The patient should be kept in bed. Almost immediately after application of the ointment all pain and itching will disappear, and the copious discharge will soon lessen.

According to Braun this salve forms a protective covering over the ulcer, and the lanolin absorbs the purulent discharge, while further suppuration is checked. The ulcer will therefore become dry and heal. In discolored ulcers the salve should be applied four or five times a day. In about three or four days the ulcerated surface will assume a healthy appearance and cicatrization will begin. The author has even seen deep and extensive varicose ulcers heal in this way, without any transplantation of skin being necessary. After healing, the author advises that an elastic bandage should be worn for some time over the seat of the ulcer.

This same salve has been found by Braun to be of great service in eczema, and as an application to any granulating surface. In eczema capillittii the addition of a little bichloride of mercury will be found excellent.

BROMIDE OF ETHYLENE IN EPILEPSY.

The *Münchner Med. Wochenschrift*, May 5, 1891, contains the description of a new anti-epileptic, reported by Dr. J. Donath, of Budapest. The remedy advocated is bromide of ethylene (æthylenum bromatum). The drug is of a light brown color and smells something like chloroform. Its taste is sweet, but it leaves a burning sensation in the mouth. At O°C. it freezes to a snow-white crystalline mass, and it boils at 131° C. Its specific gravity is comparatively high, being 2.163, at 21°C. Bromide of ethylene contains 90.9 per cent. of bromine. The fluid is insoluble in water, but is soluble in any proportion of rectified alcohol, and forms a perfectly clear solution in any of the fatty oils, such as oil of sweet almonds.

The drug is best given in the following 5 per cent. oily emulsion:

℞ Aethyleni brom..... 5.0 grammes
Ad. emuls. oleos.....100.0 "
M. Sig.

Thirty drops in a little sugar and water two or three times a day for adults. On the third day the dose should be increased to 40 drops; in three days again to a coffeespoonful, then to a teaspoonful. In children from eight to ten years of age, the initial dose should only be 10–20 drops. The dilution of the emulsion in water or milk is necessitated on account of its irritating properties, and any gastric irritation is to be avoided. In patients with extremely irritable stomachs, gramme 0, 1–0,2 of the aqueous extract of opium should be added to the above formula. Toxic symptoms following the use of the drug were never observed.

Another simple form for its administration is:

℞ Aethyleni brom. aromati.
Spirit vini rect.....aa.....5.0 grammes
M. Sig. 5, 10 to 15 drops well stirred in ⅓ glass of milk two or three times a day.

Very sensitive persons may take the drug in gelatine capsules, associated with almond oil; each capsule containing three drops of bromide of ethylene and six drops of almond oil. Two to four of these capsules to be taken daily.

Dr. Donath has used the drug in twenty-one cases of epilepsy, and reports fully the history of ten of these cases which were under observation for a long period. It was observed that under the remedy's influence the convulsions occurred more seldom, that they were of shorter duration, and milder. Frequently the disease becomes of a much milder type and the period of immunity from the convulsions increased. In some cases the improvement was so great, that the convulsions only amounted to slight muscular twitchings without loss of consciousness. The general condition of the patients was also greatly improved by the treatment. In many respects the drug's actions are far more favorable than those of bromide of potassium.

IODOFORM IN BURNS.

Rottenberg, in the *Münchener Med. Wochenschrift*, May 5, 1891, speaks of the great efficacy of iodoform in all kinds of burns, and especially those caused by molton iron. His method of treatment is as follows: Through the punctured blisters he pulls a silk thread soaked in a bichloride solution; he then covers the entire surface of the wound with a thick layer of the following salve:

℞ Iodoform.....10 parts
Vaseline.....100 "

This is then covered with rubber or a protective. The salve should be freshly applied daily.

This treatment not only results in a speedy cure, but also relieves almost like magic the burning pains.

THE TREATMENT OF PNEUMONIA BY LARGE DOSES OF DIGITALIS.

We have already on one or two occasions called attention to the mode of treatment recommended by Dr. Petresco of combating pneumonia with large doses of digitalis, and in the *Therapeutische Monatshefte* for February, 1891, this author publishes an additional communication on this subject, in which he offers a number of arguments and reports of a number of cases to support his position as to the value of very large doses of digitalis in this disease. The dose which this author recommends is simply enormous in contrast to that which is ordinarily regarded as the safe dose of digitalis, Professor Pretresco stating that he does not hesitate in single doses to give as much as 180 grains of digitalis-leaves in twenty-four hours, although he admits that ordinarily the dose for twenty-four hours does not exceed 25 grains. He prefers the infusion made with 4 parts of digitalis-leaves in 200 of water, and then adding 40 parts of syrup of orange-peel, the dose then being a tablespoonful every half hour. He states that in general this dose is very well borne, and that he has never met a single case of poisoning. Dr. Petresco meets the incredulity which has been expressed as to the tolerance of these large doses, with the explanation that he can only have employed inferior quality of digitalis-leaves, with a denial, and states that he has employed the leaves obtained from all the best pharmacists in Europe, with, as a rule, the same results. He states that he has obtained the best results in genuine fibrous or croupous pneumonia. In infectious pneumonia he has usually combined it with antiseptic methods. He also states that he has obtained satisfactory results in cases of pneumonia complicated with bronchitis and pleurisy, and he claims in the most positive manner to have cut short undoubted cases of croupous pneumonia, so that within twenty-four to forty-eight hours—the time necessary for the effects of the digitalis to be demonstrated—he has succeeded in obtaining sudden and almost absolute reduction of the temperature to the normal, accompanied with reduction of the pulse, while at the same time this disappearance of fever is accompanied by general improvement in the patient's condition, pain and cough being diminished, the temperature becoming normal, while the healing process rapidly goes on to completion. These large doses, with the exception of but rare cases, are without effect on the digestive canal, although sometimes he has met with vomiting as the result of this method of treatment. The most evident symptom detectable as to the effect of this medication is the marked slowing in the pulse, with increased tension. The author publishes a number of sphygmograms, illustrating the effect of digitalis on the pulse in cases of pneumonia, and concludes his paper with the following deductions:

1. Digitalis has an important antiphlogistic action only in its special therapeutic dose.

2. Its specific therapeutic dose of digitalis amounts to from 75 to 150 grains of digitalis-leaves administered as an infusion in twenty-four hours.

3. This dose may be administered in from two to four days continuously, according to the severity of the case. In some cases from 300 to 375 grains of digitalis-leaves being given in four or five days without symptoms of nausea, or in fact, any toxic effect. Treated with this dose, the temperature in cases of pneumonia falls from 1° to 3° C. after a single dose, and from 5° to 6° C. after three doses, while the pulse is slowed from 40 to 60 beats in the minute after six doses. This reduction in the pulse-frequency and in the temperature lasts from ten to twelve days, by which time the normal condition has been gradually obtained.

4. Simultaneously with this diminution in the rate of circulation and respiration, disappearance of all the local symptoms of pneumonia can be noted.

5. The value of this method of treatment is proved by statistics, the mortality of cases of pneumonia so treated with high doses of digitalis being much less than that observable when any other method is employed.

6. The value and harmlessness of this therapeutic dose of digitalis is established by the author's numerous individual experiments and by the cases reported by his scholars.

7. From studies as to the value of this method of treatment the author concludes that the expectant method of treating pneumonia is not only irrational but even dangerous; that the assumption that there is a definite cycle of progress in pneumonia is not warranted; that pneumonia may be cut short by an energetic rational mode of treatment, especially if the method is inaugurated at the onset of the disease, and that, finally, the claim is supported that the treatment of pneumonia with large doses of digitalis furnishes better results than that obtainable by any other mode of procedure.—*Ther. Gaz.*

THE TREATMENT OF RHEUMATIC HYPERPYREXIA.

Dr. Herbert C. Male, in the *Practitioner* says: The occurrence of hyperpyrexia in acute rheumatism, though happily rare, is a complication of grave import, and demands most active and immediate treatment.

Previous to 1870, cases of Cerebral Rheumatism with extreme pyrexia were mostly regarded as hopeless. In this year however Meding, published a case of rheumatic fever, in which a temperature of 108.6° was successfully reduced by means of cold affusion and iced enemata; and in the following year Wilson Fox further drew the attention of the profession to the subject by his treatise on *Hyperpyrexia*, and described very fully two cases of extreme pyrexia (temp. 107.3° and 110°), where the treatment by the external application of cold was carried out with success. Since that time the value of this method of treatment has been universally recognized.

It has been abundantly proved that excessive rises of temperature, in rheumatism at all events, cannot be kept in check by drugs alone. Quinine has been given in large doses, as much as 120 grains in six hours. In the case reported below, the patient was saturated with quinine; he had been taking 12 grs. *per diem* for a fortnight previously, and on the approach of hyperpyrexia large doses were given and continued without any apparent effect on the temperature. Salicylic acid and its salts are powerless, and the complication has often arisen in patients who have been throughout their illness treated by full doses of this drug. Antipyrin and antifebrin are transient in their effects, and are dangerous to continue from their depressing effect on the heart, which is probably already weakened by the disease. Antifebrin was given to the patient A. H. on November 4; the temperature did not rise during its administration, and it certainly had the effect of causing some moisture to appear on the skin which was previously harsh and dry. Delirium was not relieved. It was not thought advisable, in his weak condition, to continue its use.

Relying therefore solely on the employment of cold in reducing excess of temperature, we must decide at what temperature this treatment must be commenced. Wilson Fox has never seen a case of rheumatic fever recover unbathed after a temperature of 106° has been attained. Merchison has known a case recover after a temperature of 106.5°, but he states that this must be extremely rare.

In other diseases, such as typhoid fever and pneumonia, a temperature of 108° has been reached and recovered from, without special treatment, but Wilson Fox thinks that the "power of sustaining life in acute rheumatism after excessive temperature is less than in other diseases"; therefore we cannot afford to wait so long.

Some ten years ago the Committee of the Clinical Society of London made an exhaustive inquiry into this subject, and in their Report they show the necessity of not allowing the temperature to exceed 105°. In six out of eleven fatal cases (unbathed) the temperature did not reach 106°, and they have shown that the treatment by cold is more successful the earlier it is commenced. Moreover the temperature may rapidly rise when once it begins: in a case mentioned by Fox the temperature ran up from ordinary to 109° in two hours.

There are practically but two methods of applying cold to the surface of the body with the view of reducing temperature; by means of the *bath*, and by the *cold pack*.

When the *bath* is used, it is recommended that the patient be lowered into it in a sheet, at a temperature of 90°—100° F., and that it be cooled down by adding cold water, or preferably pieces of ice, till it is reduced to 60° or 70°.

He should remain in the bath till the thermometer, placed in the rectum, has fallen to 101°—102°, unless any symptom of faintness or shivering require it to be discontinued earlier. In many cases the patient's temperature continues to fall after his removal from the bath. He must be

rubbed dry, and placed in bed lightly covered with blankets; if the temperature fall too low, or the patient is shivering, hot bottles and stimulants are required.

The *cold pack* is best applied in the following way:—The patient remains in his bed; he is stripped of all clothing and a mackintosh is placed under him. Towels are wrung out of iced water and applied to the trunk, head, and limbs. These are changed frequently, and the body sponged over with lumps of ice. An ice-bag should also be applied along the whole length of the spine. The temperature must be carefully watched as before, and the pack discontinued when its reduction has been effected.

The *choice of method* to be employed must depend on the circumstances of the case.

In hospital practice where sufficient assistance and all appliances are at hand, the bath is generally preferred. It is doubtless a more thorough method, and appears to be attended by no greater shock or risk to the patient. On the other hand in private practice it is seldom that the bath can be satisfactorily employed, and for several reasons the pack may be preferred. It can be applied at once, it is less alarming to the friends, it does not necessitate the moving about of the patient, it can be carried out by one intelligent attendant without constant medical supervision, and its effect on the patient can be more readily watched. Moreover it has been proved to be thoroughly successful even in extreme cases of hyperpyrexia. Temperatures above 110° F. have been recovered from after treatment by the cold pack, as well as by the bath.

In some cases one bathing is sufficient to effect reduction of temperature, no further excessive rise taking place. In others it has required to be repeated, and it has been used as often as twenty-six times on the same patient with ultimate success.

The length of time required for reduction varies considerably, and bears no proportion to the severity of the case. In the case reported, the time that the pack required to be used varied from half-an-hour to three hours.

The following facts will give some idea of the proportion of recoveries that may be looked for after this treatment.

Wilson Fox collected a series of twenty-two cases from 1867 to 1871, temperatures ranging between 106° and 111.7°; eighteen were treated by ordinary means without the application of cold, and all were fatal; the remaining four were treated by the cold bath and three of them were successful, the highest temperature being 110°.

The Committee of the Clinical Society of London collected a series of sixty-seven cases during the ten years ending 1879. In thirty-nine of these the temperature exceeded 106°, and in thirty-four the treatment by cold bathing was adopted, and fourteen recovered, the highest temperature being 109°—110°.

Of the more moderate temperatures among these (viz. between 106° and 107°), eight out of eleven cases recovered, over two-thirds. All the cases that were unbathed died.

In the ten years ending 1890 many cases of recovery have been reported from time to time in the journals, and I have been able to find a record of sixteen cases with thirteen recoveries; temperatures ranging from 106° —110.4°. The pack was used in eight of these with two deaths, and the bath in the remaining eight with one death.

It is not possible of course to form an accurate idea of the proportion of recoveries from the study of published cases alone, as it is probable that many unsuccessful ones have not been published, while the majority of successful cases have been put on record. Still there is ample evidence of frequent recovery after extreme temperatures, which under other conditions must certainly have been fatal.

While however recognizing the success that often follows the employment of cold in rheumatic pyrexia, we must ascertain if there are any dangers attending its use.

Bristowe, records a case where the cold bath on two occasions produced such serious faintness, after five minutes' immersion, that it had to be discontinued.

At Guy's Hospital,[2] during 1874 and 1877, death took place on two occasions during immersion; but in these cases the bath was probably too long delayed, and the heart and tissues had suffered too much from the excessive heat to stand the shock.

In several cases violent purgation has resulted after immersion.

In a case previously reported by the writer, tetaniform convulsions, which occurred after the first application of cold, were so exaggerated on the attempted repetition of the pack, that it was impossible to apply it. The patient eventually died asphyxiated during a convulsive spasm. Another case of a similar kind has also been recorded.

These difficulties, however, appear to be exceptional, and it is well to note that the

various visceral lesions, such as pericarditis and pneumonia, so common in acute rheumatism, are no contra-indications to the use of cold. Indeed, as Wilson Fox asserts, intense pyrexia predisposes to congestion of internal organs, and the physical signs of such have been frequently observed to clear up during treatment by cold.

The following case is recorded, not unfortunately, as an example of a cure after cold packing, but to show the marked effect of this treatment in keeping the temperature within bounds over a prolonged period, its reduction being effected on each of the eight occasions on which it was used. It further shows that, on the discontinuance of the treatment, there followed a rapid rise of temperature, with exaggeration of all the symptoms until the fatal termination. The case also illustrates the variability of the time required to effect a reduction of temperature.

The spinal ice-bag was chiefly of service when used in conjunction with the iced towels. When employed alone, it appeared on the first occasion to delay for several hours a threatening rise, and the second time, when the bag was allowed to remain after the removal of the towels the temperature continued to fall for three hours, and rose again slightly after it was removed. On another ocasion, the afternoon of November 5, the temperature rose rapidly in spite of it.

There was little doubt the patient's life was lengthened for some days by the treatment. It prolonged a period when the efforts of nature might have brought about a change for the better, had other conditions been favorable.

Previous to the onset of hyperpyrexia, the patient's strength was already exhausted. He had been ill for over five weeks, with constant pain and want of sleep. Pericarditis had existed long enough to cause such local organic change as seriously hampered the action of his heart, and this further lessened his chances of recovery.

Such a case impresses upon us the necessity of making a most careful record of temperature in all cases of acute rheumatism, and of recognizing at once the earliest signs of approaching hyperpyrexia.

Should the temperature show an undue rise, we should not waste valuable time by the administration of drugs, but endeavor to check it at once by the prompt application of cold.

The result of such treatment in a favorable case, is most gratifying. The patient may be dying from excess of temperature one hour, and the next may be in comparitive comfort, and with prospects of a speedy recovery. One bathing has frequently turned the scale. The treatment may be applied readily both in private and in hospital practice, and should not be withheld from any patient, in whatever circumstances he may be placed.

MEDICINE.

SALICYLATE OF MERCURY AS AN ANTISEPTIC.

At a recent meeting of the Surgical Society of Paris, Dr. Vacher, of Orléans, read a paper on the antiseptic qualities of salicylate of mercury, which is quoted in the *Bulletin Médical*. He considers the drug an admirable antiseptic, and superier to Van Swieten's solution because solutions of salicylate of mercury need not contain alcohol. Solutions of any strength are perfectly stable and will keep indefinitely. It is non-irritating and a powerful antiseptic. In the treatment of syphilis Dr. Vacher has found it to be of great service, particularly when given hypodermically. The injections produce no pain and cause no local inflammation. The author has used the drug in solution hypodermically in over one hundred cases of syphilis and with the best results. Salicylate of mercury is always well tolerated.

NOVEL TREATMENT OF GONORRHŒA.

Dr. Hanicka, in the *Reichs-Medicinal-Anzeiger*, May 15, 1891, speaks highly of the following novel treatment for gonorrhœa: A powder composed of equal parts of tannin, iodoform, and sulphate of thallin is applied to the urethra by means of a catheter-like instrument until the former is entirely full of the remedy. Prompt healing is said to take place in every instance.

NINETY CASES OF PARETIC DEMENTIA.

Dr. G. R. Trowbridge, in the *Alienist and Neurologist*, writes: The very fact that this disease was practically unrecognized in this country forty years ago, and to-day ranks among the worst forms of insanity, is sufficient reason to make statistics on the subject both of considerable interest and value. In all probability there were cases of paretic dementia before the time of Bayle, and although he is credited, I believe, with first having accurately described the signs

and symptoms of it about the year 1825, it is scarcely probable that the inhabitants of this world were exempt from it though it was not recognized and understood as it is to-day.

History is indirectly contradictory to this, and if we are to believe the facts as recorded there were certainly sufficient causes in the Middle Ages to produce a generous supply of paretic dementia, and I have not the least doubt but that it existed to a considerable extent among the so-called nobility of France, England and other European nations, whose ideas of morality and moderation were somewhat at a discount. The same causes which are producing it to-day were in working order then, though perhaps not to so great an extent; and granting that the mental, moral and physical conditions of two centuries ago were practically the same as those of the nineteenth century, it is fair to conclude that this age is not entirely responsible for this disease.

That paretic dementia is increasing in this country with alarming rapidity there is no room for doubt, as the reports of our institutions for the insane show. It is, however, only another indication of the "fast" age in which we live; and this yearly increase of the disorder is not a thing of which the American citizen should be proud, but on the contrary, it should be looked upon as a veritable curse, as it only proves that those vices and immoralities which are the cornerstone of general paresis, are increasing and causing the moral, physical and mental wreck of our fellow-citizens. No one can realize the truth of this better than the medical officers in our hospitals for the insane. In a large number of cases of paretic dementia admitted to hospitals for the insane, causes for the disease are given which are ridiculous in the extreme; and though either through ignorance or unwillingness on the part of friends, or delicacy on the part of the physician, the real and true cause cannot be ascertained, yet in three cases out of five it would be a comparatively easy matter to guess it, as the real causes of paretic dementia can be sifted down to an extremely small number.

The following statistics of ninety cases were compiled from the registers of this hospital, and though they are more or less defective, they present some interesting points.

Of the 3,518 admissions to this hospital, 90 were cases of paretic dementia; 77 of these being males and 13 females. This is about two and one-half per cent of the entire number admitted.

In the State Hospital for the Insane, at Independence, Iowa, of 3,700 admissions, 40, or a little over one per cent, were cases of paretic dementia.

Of 2,297 male patients at the Pauper Asylum of N. Y. City, 284, or a little over twelve per cent, were paretic.

First among exciting causes is the excessive use of alcohol. This is acknowledged, I believe, by the majority of writers to be a great producer of general paralysis. In close relation to it, both socially and as an exciting cause, is syphilis. It is claimed by some that syphilis is not an exciting cause of paretic dementia, but there are cases of general paralysis which cannot be traced to any other source, and the symptoms of this form are so identical with the regular general paralysis that it is stretching a point to claim another name for the disease. It is a distinction without a difference. This, however, does not mean that syphilis always produces paretic dementia to the exclusion of other insanities.

The excessive indulgence of vicious habits, as a rule, is likely to produce some impairment of the mental faculties, and in the majority of cases of paretic dementia, were the truth known, alcohol and syphilis would occupy the first place as exciting causes.

Here, again, the question reverts to one of social standing. Alcohol and syphilis are luxuries which are placed within the reach of everybody, from the laborer to the millionaire, but we find in my ninety cases, on a close comparison, that as the number in the exciting causes lessens, the cause itself becomes more respectable. I found that intemperance was given as a cause, especially among laborers and miners, and the same was true of syphilis, whereas the occupation, being a little better, the cause appeared as overwork, or was unknown.

Paretic dementia, as a rule, does not attack vigorous and well-balanced minds, unless, perchance, heredity plays a part, but is found among the class whose morals are of such a low grade that regard for themselves or others is completely destroyed, and they give themselves up to immoralities and vices which are the exciting causes of the disease. Thirty-four of the seventy-seven cases were due to either alcoholism, syphilis or heredity, or a combination of two or more, and I venture to say that in the twenty-six cases in which the cause was unknown, these three factors would be in the majority. Heredity plays an important part in the causation of paretic dementia,

though I do not think as important a one as alcohol and syphilis, as it acts more as a predisposing cause.

The disease, as a rule, does not attack either extreme age or youth, but on the contrary seems to select individuals in the prime of life. In summarizing these ninety cases, I find that among the men, the youngest case when attacked was 26 years old, and the oldest 63 years; the average of the 77 cases being 41 years and 8 months.

Among the 13 females, the youngest was 21 years of age, and the oldest 56 years, the average being 41 years and 6 months.

In regard to duration, my cases show that among the males (50 cases) the longest time for the disease to run its course was ten years; the shortest, six months. Average of the fifty cases, two years and seven months; and among the females (8 cases) the longest was six years; the shortest, one year and six months; average, two years and eight months. Average of fifty-eight cases, male and female, two years, eight and one-half months.

I have here only taken those cases in which the disease has completed its course, *i. e.*, resulted in death, as some are still here, and others were, for various reasons, discharged.

I think a fair average of the course of the disease is from two and one-half to three years, though, as we have seen, the course in single cases may be varied to either extreme.

The time spent in the hospital by these patients is as follows—and here, again, I shall only consider those cases resulting in death, omitting those which are still here, and those which have been discharged. Among the fifty male cases, the longest residence in the hospital was seven years, the shortest, eight days; average, one year and nine months. Among the eight female cases, the longest residence was three years and two months, shortest, three months; average one year and six months. Average for the fifty-eight cases, one year and seven and one-half months.

The average duration before admission was, males, one year and one month; females, one year and two months.

The ages at deaths were as follows: Males, oldest, 65 years; youngest, 29 years; average, forty-four years, three months. Females, oldest, 58 years; youngest, 26 years; average, forty-four years and two months.

I shall not draw any conclusions from these cases, as I would only repeat those of other writers, but leave that to my readers.

We must realize that if this disease continues to gain ground, and go on increasing, we will have another powerful factor which will aid in the mental, moral and physical deterioration of the American people as a whole.

There is room for improvement in our mode and manners of life, and the sooner we realize it the better it will be for this and future generations.

THE STATUS EPILEPTICUS.

Dr. Robert T. Edes, in the *Virg. Med. Month.*, says: The name "status epilepticus," is, or was, applied to a continuous succession of epileptic fits, coming so rapidly that one does not end before another begins; that is, if we count as a fit not only the period marked by active convulsive movements, but the stage of unconsciousness succeeding it.

This is the usual condition, but it is probable that the same, or a similar, pathological state prevails, and may very properly bear the same name where the convulsions are not all very well marked, but are indicated, or at least some of them are so, simply by muscular twitchings not developing into general convulsions.

Rise of temperature, pulse and respiration are characteristic symptoms; and some others noted in my case, as the extremely dirty tongue, and the rapid supervention of sloughing of the nates, have been commented on before.

In the more typical cases, the status epilepticus is divided into two stages—one marked by the severity of the convulsions, and a second comatose, delirious, or collapsing, which has been termed, though improperly, the meningitic stage.

In looking over the recommendations of authors for treatment, one finds that they agree chiefly on one point, the uselessness of a large number of drugs.

Nitrite of amyl, however, seems to have been of considerable value. It was tried, but not very successfully, in our case first reported. In the other, it was of decided advantage. Amylene hydrate has also been highly spoken of.

In one case he was confident that ether had a decided effect in postponing the attacks, and chloral hydrate, in not excessive doses, by the rectum, was even more efficacious. How far chloral, if used early and freely, might have been efficient, not merely in checking the convulsive movements, but in preserving life, is not so easy to say. It

certainly seems to me that, either alone or combined with bromide, it gives the best chance of attaining this object.

It is not, however, so easy to be certain of this, for the reason that in some cases, and some fatal cases, the severe muscular contractions are not the most prominent features, but the coma and fever, with a few well-marked convulsions, and a more or less constant, but not violent muscular twitching, seems to constitute the disease.

In the comatose stage, or that of collapse, chloral would certainly not seem indicated. He was surprised not to find it even mentioned in either of two monographs* founded on an apparently thorough study of the subject.

A phenomenon, which is sufficiently often seen to have been considered by some writers essential, or even diagnostic, is a moderate and usually evanescent hemiplegia. This has been wrongly attributed to some gross permanent lesion in the brain, which by no means invariably exists.

In one case, nothing of the kind could be observed, although repeatedly and carefully looked for. The only possible indication of any unilateral affection was the turning of the eyes and head to the right for a few seconds at the beginning of a fit.

In another case, there were differences of sensation and slightly of motion in the two sides, but the only gross lesion noted was in the median line.

A CASE OF PSEUDO-CHOREA.

When first seen at the out-patient department the most conspicuous features about the case were clonic movements of some of the muscles of his trunk, which jerked the latter forcibly to the right side, the diaphragm being affected at the same time, so that a grunting inspiratory sound was produced which often interrupted his speech in a quite characteristic manner. His gait was hemiplegic and the muscular strength was found to be distinctly subnormal on the entire right side, the movements were confined to the trunk and followed each other in quick succession. The motions of the limbs were found only to be communicated. The man was totally unable to walk alone.

As regards his family history, we were told that the patient's father had died with an acute brain-trouble, the exact nature of which, however, could not be ascertained. The patient had been well and strong. No excesses *in Baccho aut Venere*. No syphilis. In 1888 he entered the army. In 1889 he was in Washington Territory with his regiment and much exposed to wet and cold. During the next summer, following a good deal of exposure, he was attacked with severe pain in his back, which shot down into his legs, especially the right one to the toes. The joints were neither swollen nor red, but the attack was of considerable severity, so that, as he states, he was unable to walk for between two to three months. While still at the hospital, he had an attack of the same nature as the present one, which persisted for four months and gradually disappeared. With the exception of a very slight return in the spring of 1890, he remained perfectly well until 15 days before he was first seen. While driving a wagon the axle broke and he was thrown out. He was not hurt, but two hours later the jerking movement referred to above suddenly appeared.

Two days after presenting himself at the dispensary he was admitted to the hospital, the condition was then slightly better. A more careful examination was made. The latissimus dorsi., the rhomb., the serrat., were found to be especially affected. The pectoralis less so. Of the abdominal muscles the rectus. The diaphragm as stated above. The weakness of the right side still well marked. Some tenderness over the erect. spinae.

About the movements the note, which was dictated by Dr. Lafleur, says: "the movements are of great rapidity and have almost a rhythmic character jerking his body to the right in a manner which reminds one somewhat of the canine chorea."

The viscera showed no changes.

He was found to have dulling to sensation of pain (not of touch or of heat) in the whole right side with the exception of the face. There is diminution in the reflexes on that side. The perimetric fields of both eyes were equal and normal. The special senses are in no way affected. Electrically there was no change found.

The patient was placed in a room by himself and no medication save a placebo was given.

The improvement was rapid and remarkable. He slept comfortably, the jerks diminished in frequency and four days later only occasional movements were observed, and still three days later they had almost completely ceased. Now the only features remaining are the sensory changes and the changes in the reflexes. The resemblances

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* Hertz.—Status Epilepticus. *Inaug. Dissert., Bonn, 1877.* Lorenz, *op. cit.*

to Sydenham's chorea exist of course only in a rough way. The points which are unlike the true chorea, are: (1) the almost rhythmical character of the movement; (2) the electric-like character of them; (3) the fact that they were confined to the trunk; (4) the sensory changes; (5) the fact that in a quite short time the movements reach the greatest severity.

The case, therefore, must be classed under the head of Pseudo-chorea, which belongs under the large heading of Hysteria.—Dr. Hoch in the *Johns Hopkins Hosp. Bull.*

SURGERY.

MICROCIDIN—A NEW ANTISEPTIC.

At the meeting of the French Academy of Medicine, held in Paris, April 28, and reported in the *Bulletin Médicale*, April 29, 1891, Dr. Polaillon read a paper on the subject of microcidin, a new antiseptic which has recently been discovered by Dr. Berlioz.

A quantity of *B* naphthol is heated to the melting point, and the half of this quantity (by weight) of caustic soda is added and the mixture allowed to cool. The result will be a white powder composed largely of naphthol and soda, but besides this composites of naphthol and phenol, which give the substance peculiar properties which seem to justify the name of microcidin, which Berlioz has given it.

The substance is soluble in three times its weight of water. Concentrated solutions are of a brown color, while the weak solutions are almost colorless. It is but very slightly toxic. Its antiseptic properties are weaker than those of bichloride of mercury and naphthol, but it is ten times as strongly antiseptic as carbolic acid in solutions of similar strength. The toxicity of microcidin is less than that of naphthol, and, of course, infinitely less than that of bichloride of mercury. The substance is almost entirely eliminated through the urine.

Regarding the clinical value of the preparation, Polaillon has used a 3 per cent. solution of microcidin with excellent results in leg ulcers, various suppurations and suppurating wounds. The solution is non-irritating, promotes healing, and keeps the wound clean.

SURGICAL AND CLINATIC TREATMENT OF PHTHISIS.

An interesting monograph on the above subject has been recently published in German, by Dr. C. Spenglar, of Davos (Switzerland).

The author claims that neither cavities, empyeman or pyo-pneumo-thorax can heal unless the necessary mechanical conditions are brought about. Arguing from this point Spengler advocates the establishment of an open pneumo-thorax, by a free resection of ribs. In advocating this procedure he places himself on the same stand as Schede and Immermann. In young subjects the method promises better results than in older patients. The principle consists in the hypothesis that the atmospheric pressure on the lung would cause a shrinking of the thorax. Of course, there is always more or less displacement of the organs of the chest, especially the heart, but not enough to cause any untoward effect. This treatment should be supplemented by a careful dietary, hygienic and climatic treatment—high altitudes being preferable. Finally, Spengler cites many cases which show the efficacy of the treatment, although in many cases sufficient time had not elapsed to warrant a more than improved condition.—*Centralblatt für Chirurgie*, April 25, 1891.

SURGICAL TREATMENT OF APPENDICITIS.

Dr. Randolph Winslow, in approaching this subject from a surgical standpoint, states that there was great difficulty experienced from the confusion in the nomenclature applied to the inflammatory troubles in the right iliac fossa, and that this confusion in nomenclature meant an equal obscurity in our ideas of the pathology of these affections.

The terms typhlitis, perityphlitis, and paratyphlitis, are used more or less indiscriminately for painful inflammatory affections of the right flank, which may be widely different in character.

Typhlitis is an inflammation of the cæcum, which may be limited to its mucous coats, or may penetrate more deeply, until the peritoneal coat is reached, when the resulting peritonitis, with its accompanying exudation, is called *perityphlitis;* and if pus forms, a *perityphlitic abscess* is said to be present.

It was supposed until quite recently that the cæcum was only partially covered by peritoneum, leaving a large part of its walls with no peritoneal coat, and in immediate relation with the post-cæcal connective tissue. This is an error, the cæcum has a distinct mesentery in the vast majority of cases, and floats quite freely within the

peritoneal cavity. And when an abscess forms, it is almost invariably found to have its primary seat within the peritoneal sac—the diffusion of the pus being prevented by adherent coils of intestines. Sometimes, as a secondary result, the peritoneum is destroyed and the pus escapes into the post-peritoneal connective tissues. It would be much better to use the terms cæcitis and appendicitis to describe inflammations of the cæcum and vermiform appendix, and to discard such expressions as typhlitis, perityphlitis, and paratyphlitis, as being obscure and obsolete. *Cæcitis or typhlitis* is a disease amenable to medical measures, and but seldom calling for surgical treatment, whilst *para-* and *peri-typhlitis*, meaning thereby an inflammation of the post-cæcal connective tissue, but seldom occurs.

As the various inflammatory conditions within the female pelvis are usually found to depend upon disease of the Fallopian tubes, so the inflammations found in the right iliac fossa usually have their origin in diseased conditions of the vermiform process. It is very important, therefore, that we should have correct ideas about this very troublesome and apparently useless bit of anatomy.

The *vermiform appendix* varies in size, length, and position; sometimes it has quite a distinct mesentery, but generally it is quite free, and may be found occupying almost any relation to the cæcum. Its tip may be found in the pelvis or turned upwards and attached to the abdominal wall or some of the viscera, or the whole process may be found behind the cæcum, or in fact occupying almost any relation to this gut.

It is probable that the appendix is frequently diseased without producing very decided or distinct symptoms, and that recoveries occur both with and without treatment.

When, however, *acute appendicitis* sets in, the symptoms are generally quite characteristic; but it is not every case of acute appendicitis that demands operative treatment. When the symptoms are not very severe, the pain not intense, and the fever not high, and especially if no tumor is to be felt, reliance should be placed upon medical treatment; a careful watch should, nevertheless, be kept for evidences of the development of more threatening symptoms. Even where there is a swelling found in the right iliac fossa, it does not necessarily demand operation. He has seen a number of cases recover after a decided exudation had occurred, without operation or any appreciable discharge of pus.

It has been recommended, and in many cases carried out, to aspirate the suspected region. Whilst this method has yielded good results, he is unable to approve its employment, as it is excessively hard to properly disinfect an aspirating needle, and a serious accumulation may become converted into a purulent one, besides the risk of penetrating the intestines or some blood vessel. When the diagnosis must depend upon the detection of fluid within a circumscribed space, it will be less dangerous to make an incision down to the seat of disease, than to aspirate.

When a decided lump is found in the right iliac fossa, which is hard, tender, and painful, and the fever keeps up, and especially if this lump increases in size, an incision should be made both for purposes of exploration and treatment. This incision should not be too long delayed, as the pus may break through the adhesions which circumscribe it, and set up a general suppurative peritonitis. It is not safe to wait until the sign of fluctuation can be detected, as this may never occur, or may occur only at a late deriod. The earlier the operation is performed the greater the probabilities of a successful termination. It may be stated that operations, when indicated at all, ought to be made as early as the fifth or even the third day.

When the symptoms of perforation come on, as sudden and intense pain with collapse, operation ought to be performed as soon as there is sufficient re-action to justify it; otherwise a generalized peritonitis will probably set in and terminate fatally. There are a few cases of perforative appendicitis, which present such obscure symptoms, that the nature of the disease is not suspected until a fulminent peritonitis is set up, with pus-bathed intestines and viscera, when it is too late to save the patient by laparotomy.

Dr. Winslow thinks we should emphasize the fact that the exudation, or pus, in a case of suppurative appendicitis, is found within the peritoneal cavity, and not in the post-peritoneal connective tissues; hence, the great danger that the adherent coils of intestines may become separated, and fatal general peritonitis occur.

Having determined to operate, the seat of incision is usually over the swelling, as thereby the most ready access to the abscess cavity is gained. The tissues are divided by a straight or curved incision in the right flank until the transversalis fascia is reached, when an aspirating

needle or hypodermic needle may be thrust in various directions into the swelling, if there is any doubt about the presence of pus, or the tissues may be cautiously divided until the peritoneal cavity is opened, when the exudation of pus or serum will be reached. If the appendix is perforated, or even if it is manifestly diseased, it should be ligated close to the cæcum and cut off. Sometimes the appendix will not be found—it has sloughed off and disappeared. It is usually better not to irrigate the abscess cavity, as there is danger that by so doing pus may be forced into the general peritoneal cavity. Free drainage should be secured, and as far as practicable, antiseptic treatment adopted; but this will be difficult, as the discharge is of an especially septic character.

As surgeons, we are also called upon to open the abdomen in those cases where the pus has set up a general peritonitis, though with but slight hope of success. Here the incision should be placed in the linea alba, with perhaps incision for drainage for one or more other points. The peritoneal cavity should be thoroughly cleansed, the intestines sponged off or washed, and free, and if possible, continuous irrigation with warm water, or a weak antiseptic solution kept up—several drainage tubes being placed in favorable situations. One or two cases have been recorded of recovery after continuous irrigation for several days.

A certain quite large number of cases of appendicitis recur after having apparently healed, and not only give rise to considerable local reaction, but even to danger.

Treves, of London, and Senn, of Milwaukee, recommend the removal of a diseased appendix during the intervals of quietude from acute outbreak, and report several successful operations in such cases. Dr. Winslow is strongly inclined to the opinion that this is correct surgical doctrine, notwithstanding the protest of Dr. Dennis, of New York, against it; and he will certainly carry it out in practice in appropriate cases. Dr. Winslow referred to a patient who has had two attacks of painful febrile affections on the right side of the abdomen, the first of which was recovered from under medical treatment, and the last, after incision, who is determined to have the more radical operation performed if he has another recurrence.

In conclusion Dr. Winslow submits the following propositions:

1st. Inflammatory affections in the right iliac fossa are atmost invariably due to diseased conditions of the appendix vermiformis.

2nd. When an abscess forms in the course of such affections, the pus is found, primarily, within the peritoneal cavity, and not in the post-cæcal connective tissue.

3rd. Many mild, and some severe attacks of appendicitis are recovered from without operation.

4th. When there is severe localized pain, tenderness, and a tumor present in the right iliac region, with the constitutional suppurative inflammation, an early operation is demanded to evacuate the pus. This should be done as early as the third day when possible.

5th. Delay is more dangerous than operation, as the adhesions circumscribing the pus may give way, and a rapidly fatal peritonitis may be set up.—*Virg. Med. Month.*

GYNÆCOLOGY.

INCISION VERSUS RAPID DILATATION FOR STENOSIS OF THE CERVICAL CANAL.

Dr. James H. Reilly in a paper before the *Vermont Medical Society* said: I feel that I owe the society an apology in claiming that better results can be obtained in the treatment of constriction of the cervical canal for dysmenorrhœa and sterility than by the more modern procedure, rapid dilatation, as advocated by Goodell and other eminent gynæcologists; but after an experience in the treatment of forty cases, my statistics force me to take the stand that I have taken.

When cases of this kind first came under my direct observation for treatment, I resorted to the operation by means of rapid dilatation as a means to produce a radical cure. I assisted at the operation a great many times during my service as hospital interne, and whilst I looked upon the operation as a barbarous procedure, it evidently accomplished the dilatation to such a marked degree that I reconciled myself with the idea that the end justified the means. That the canal could contract again to the same degree as before operation appeared at that time to me an impossibility, but it was not my privilege to watch the progress and termination of these cases after leaving the hospital, and, not hearing of any unsatisfactory results, I concluded that the operation must have been very gratifying to the operator as well as to the patient. After entering practice, when cases of this nature

presented themselves to me, the first operation that suggested itself was that of rapid dilatation; and after meeting with cases where, after dilatation to the maximum extent (suggested by enthusiastic advocates of the operation), and carrying out the after-treatment in the manner advocated by them, the contraction was as marked as before the operation, if not to a greater extent, I have concluded that the operation does not overcome, to a permanent degree, the contraction of the cervical canal.

The causes for which we are called upon to do this operation generally are dysmenorrhœa and sterility. When I say dysmenorrhœa and sterility, I do not mean to say that all cases of painful menstruation are due to a constriction of the cervical canal, nor that all cases of sterility are due to this condition. I have only reference to those cases where every other reason is excluded and a stenosed condition of the cervical canal exists. When called upon to treat a case of sterility, I think we are justified in operating if this condition is found to be present, although history of dysmenorrhœa is not associated with the case, a condition not at all uncommon; in fact, the only case of sterility which I have successfully treated by rapid dilatation is that of a woman who presented herself to me for treatment with the following history: She had been married eight years, was twenty-one years of age when married, and had never had any serious sickness. She was very anxious to have children, and stated that if the fact that she had none was due to any condition that could be corrected she wanted to have it done. She menstruated regularly, and never had severe pains immediately before or during this period. There was no ulceration around the external os. On passing the sound it met with considerable resistance at the internal os, and was forcibly passed through. The uterus was found to be in its normal position. The only condition about her that I found to which her sterility could be attributed was this apparent constriction at the internal os. I dilated this rapidly under ether, passed a sound at short intervals for a month, after which I did not see her for four or five months, when I was called to see her for some of the disagreeable symptoms of pregnancy, and in a year from time of operation I delivered her of a twelve-pound boy.

Of the forty cases that I have operated upon, ten were for sterility and thirty for dysmenorrhœa. On the first ten cases that came under my observation for dysmenorrhœa I operated by rapid dilatation, and of these but four were relieved permanently. The condition of six others, after periods varying from three months to a year, was as bad, and in two cases worse, than before operation. They underwent a secondary operation by incision, and after a period of from one to two years I have yet to hear of an unfavorable result. Of the remaining thirty cases operated on by incision, permanent relief followed in every instance. Within the last six months I have operated on three cases which I have not included in my statistics, as I do not regard a case permanently relieved until they pass a period of one year without a recurrence of the trouble. Of the ten cases operated upon for sterility, six underwent the rapid dilatation operation. This operation proved effectual in but one case, and that as reported. After one year's time the contraction was as marked as before the operation. They underwent a secondary operation by incision. Two of them have borne children, and one other is well advanced in pregnancy, and in one the constriction is as marked as before the operation. The other patient passed from under my observation about six months after the operation. She was not pregnant at the time. On four patients I have done the operation by incision during the past year; two are now pregnant—one two months after the operation, and the other four months. On two I have operated within the past three months, and they are still under my observation.

The constriction in every case that came under my observation has been at the internal os. In not a single case have I met with any resistance with the ordinary sound until I came to the internal os, and in every instance the constriction has been so marked that an ordinary probe could not be passed unless considerable force was used. What we accomplish by dilatation is a paralyzation of the sphincter muscle surrounding the internal os, but it is only a temporary paralysis, and will gradually resume its functions again in the same manner as the sphincter ani, and after forcible dilatation for diseases peculiar to the rectum. The great tendency for this muscle to contract again after dilatation is not at all surprising. Very true, the muscular fibres that are ruptured by the dilatation lose their power of contractility, but it is almost an impossibility to rupture them all with the instruments devised for rapid dilatation, and I doubt whether we will rupture any of the fibres if only carried to the extent

advocated by some authors. When we reflect and consider how soon after labor, where the muscle surrounding the internal os is put upon a stretch to an extent of six times as great as can be accomplished by any of the dilatation instruments now in use, and how soon after it resumes its power of contractility, it is inconsistent to expect to deprive the same muscle of its function under the force of the instruments devised for that purpose. The operation by incision is not attended with any more danger than by rapid dilatation. A number of instruments, called hysterotomes, or metrotomes, have been devised to do the cutting. The objection to these instruments is that they do not incise deep enough. In my hands the long, blunt-pointed bistoury has accomplished the desired result without any trouble.

Pelvic peritonitis or cellulitis is a contra-indication for the operation; in fact, it is essential that any inflammatory trouble peculiar to the pelvis should not exist to have the operation successful. If the operation is done and any inflammatory trouble exists, the operation is certain not to be a success, but the inflammatory condition aggravated. This does not include endometritis; but, on the contrary, when this disease exists, which it does very often in consequence of a stenosed condition of the internal os, the cure of it is facilitated by the opening of the os.

The operation should be done as soon after the menstrual period as possible. This will give the tissues sufficient time before the next period to become completely healed. If the tissues are in an inflamed condition at the subsequent period, contraction is very sure to follow; for this reason a patient should not be operated upon close to a menstrual period.

A mild cathartic is given the night before the operation. If this does not prove effectual by time of the operation, the bowels are unloaded by means of a rectal enemata. A vaginal douche is given the morning of the operation; this leaves the parts in a proper condition for the operation. The various steps in the operation are as follows:

The patient is anæsthetized and placed on a table, and a bivalve speculum introduced, or a Sims, whichever is preferred by the operator. The cervix is grasped by the forceps tenaculum and held in a fixed position. A dilator is passed to open the os up to a degree large enough for the bistoury to enter. After passing the bistoury, the next step is to make the incisions. I resort to the crucial incision, one anterior and one posterior and two lateral incisions. A blunt-pointed, double-edged bistoury has been devised to simplify the operation by avoiding turning the instrument. I use the single-edged one, and do not experience any difficulty in turning it from one wall to the other. The depth of the incision is governed by the experience of the operator. The danger of a deep incision lies in the severing of the circular artery. As near as I can determine, the depth of the incision I usually make is about three-eighths of an inch. The hæmorrhage is controlled by compression with absorbent cotton passed into the canal on an applicator. Occasionally I have found it necessary to resort to applications of the persulphate of iron to control the bleeding. A douche of hot water is again given, a stem pessary introduced and held in place by tampons saturated with a solution of glycerine and carbolic acid (ten grains to the ounce), a hypodermic given, and cold applications are kept over abdomen for about four days. A vaginal douche is given once a day for about ten days. If symptoms of pelvic inflammation develop, the pessary is taken out and a sound or dilator passed every few days, and hot applications are to be made instead of cold. It is the exception for inflammatory symptoms to develop. The patients generally make uninterrupted recovery, and are able to be around the tenth day. The pessary can generally be left in for three weeks before removing. If the period is due before that, it will be essentially necessary to remove it at the expected time. The patients are instructed how to place tampons themselves. If the operation is for dysmenorrhœa, sounds should be introduced a few days before the expected period; if for sterility, I generally wait until after the period before their introduction. If the patients are not carefully observed and dilatation kept up for a year after operation, it is certain not to prove effectual.

DRAINAGE OF THE ABDOMINAL CAVITY AFTER LAPARATOMY.

While the majority of German gynæcologists practice the immediate and complete closure of the abdominal wound after laparotomies, a number of the foremost operators, both in England and America, speak in favor of abdominal drainage. Dr. M. Sänger, has recently performed fourteen laparotomies in which he has used drainage, and he claims to be forced to the conclusion that the course of such cases is much safer and less

critical than when drainage is omitted. Finally, the danger of poisoning by blood ferments is entirely obviated. There are three forms of abdominal drainage: first, the tubular drainage, with straight or bent glass tubes; second, the intra-abdominal tampon, with absorbent gauze; third, a combination of the glass tubes and absorbent gauze.

In eleven of the cases reported by Sänger, in the *Deutche Med. Wachenschrift*, the last named method was employed. A most carefully cleaned and sterilized bent glass drainage-tube was used, its sides being perforated with a number of small holes. After closure of the abdominal wound, several strips of absorbent gauze were placed in the tube by means of a similarly bent copper sound. Over all this an antiseptic and if possible an hermetically closed bandage dressing was applied. The dressings were renewed in twenty-four hours.

OBSTETRICS.

STRYCHNIA AND THE HOT DOUCHE IN THE PROPHYLAXIS OF PROTRACTED LABOR.

The following observations on the use of small doses of strychnine, given for a period prior to labor, may prove interesting. From a therapeutic point of view they are certainly useful.

I have given strychnine in one hundred cases, and the effects, as far as the children were concerned, were very gratifying. Out of the entire hundred births there were only two children still-born. One of these had evidently been dead in utero for some considerable time, and was quite macerated and softened. The other was lost by the twisting about the neck of a short cord.

With regard to the mothers, the strychnine acted as a bitter tonic and improved the appetite; its use stimulated the movements of the bowels, and to some extent prevented the constipation that is so general in pregnancy. At the time of labor not one of the patients treated with the strychnine had convulsions, so that it cannot be regarded as unsafe for this reason. Its action on the uterus was satisfactory, the contractions being regular and normal, and entirely free from any tetanic condition, as is sometimes seen after the administration of ergot during labor.

The state of uterine tone was improved by the strychnine. The contractions of the uterus were longer maintained, more regular and satisfactory, than in the case of those to whom the strychnine had not been given. The after-contraction of the uterus was better, and after-pains were greatly lessened, as the firm condition of the uterus prevented the formation of clots and the occurrence of jerky, twitching, clonic uterine action that is often so distressing to the patient. The amount of hæmorrhage was reduced. There is an impression in the minds of many that the bleeding after labor is arrested by the formation of clots in the uterine sinuses. Such, however, is not the case. The uterine vessels are surrounded by the interlacing muscular fibres of the uterus. It is the steady, firm contraction of this muscular tissue that must be regarded as the true hæmostatic, and not dead, inert clots.

Another feature well noted in the cases where strychnine had been given was that the recovery was quick and better than the average. There are several reasons for this. The shorter period of labor must have had some influence. Then the fact that there was less blood loss is important. The firm tone of the uterus, effecting speedy and good involution and controlling the after-pains, also had its share in aiding the recovery. Good, firm uterine tone lessens the risk of septic absorption, and by so much favors the patient's recovery.

Concerning the duration of labor, the following figures may assist in conveying an idea of the general usefulness of the drug. It should be remarked the treatment was adopted in cases where previous labors had been protracted owing to uterine inertia, irregular and crampy pains. Primiparæ were excluded in all cases. The one hundred cases treated with the strichnine gave an average of nine hours, whereas the average of the previous protracted labors, in the same one hundred patients, was seventeen hours. Here we have an average gain of eight hours on previous tardy deliveries, the second stage being much shorter.

The dose of the drug varied with the susceptibility of the patient. One could not tolerate more than the sixtieth of a grain. A number had reached their maximum dosage when taking one-fortieth three times daily. About one-half of the entire number bore the thirtieth of a grain well. The largest dose given in any case was the sixteenth of a grain three times a day. This amount was administered to one patient, who, during two prior labors, had almost complete uterine inertia.

It is quite possible that other tonics, such

as iron and quinine, would exert a beneficial influence where there was anemia and debility.

As a means of prophylaxis against a protracted first stage caused by a rigid and undilatable os, I strongly recommend a hot douche. All are familiar with the excellent effects of this measure in the first stage of a lingering labor, but it has not been used as prophylactic against a tedious first stage due to rigidity of the maternal tissues. The plan I have adopted is to take a new tin pail holding about two gallons, and have a small spout put on the side near the bottom. To this are attached a few feet of rubber tubing carrying a good vaginal nozzle. The pail is filled with water at 105° to 110° F. The patient sits over a receiving vessel; the nozzle is then introduced and the flow started. In this way the cervix and vagina are thoroughly douched. One caution is needed —that the hydrostatic pressure be not too great. All that is requisite is just enough to make the water flow.

It may be said that the use of the hot water will induce labor before the full term has been reached. Such, however, has not been the case in my experience. But grant that it should come on a few days sooner than it would if the douches had not been used, what harm could there possibly arise from such a circumstance? If there is not too great force in the water flow, so as to effect some separation of the membranes, there need be no fear on this score.

The douche ought to be used twice a day for a short time before labor, a week or ten days being sufficient to soften and relax a very rigid os. The local application of the hot water stimulates the blood supply of the pelvic viscera, increases the activity of the glands, and allays much of the sensitiveness of the cervix. When labor sets in the os yields sooner, is less tense and less liable to tear. The first stage is in this way very materially shortened. The abundant secretion of mucus aids the second stage. The second stage is also shortened by the relaxing action of the douches on the perineum; it, like the os, is found to yield to the pressure of the advancing head, and time and suffering are saved.

These douches may be ordered with advantage in all cases where rigidity and slow dilatation is probable, as in primiparæ, or where previous tedious labors have been known to be due to tense and rigid structures. Many patients of this latter class have gone through subsequent accouchements with comparative ease and rapidity after the use of the hot water for ten days prior to term.—*Dr. John Ferguson, in Amer. Jour. Obstetrics.*

RETAINED PLACENTA IN MISCARRIAGE—HOW SHALL WE TREAT SUCH CASES?

Dr. A. J. Swaney in the *Southern Practitioner* writes:

The reasons given for active interference are the frequency of these dangers in prolonged delivery of the placenta. The almost constant possibility of manual extraction which at once assures the woman's safety from the dangers of hæmorrhage and septic poisoning, Simpson, Munde and Grandin are perhaps the most active partisans for interference. Simpson directs if the cervix is dilated, or patent to act at once, if it is not dilated, he dilates at once. The woman is first anæsthetized, the uterus depressed as much as possible by the external hand and with the index finger of the other hand, he removes the placenta and membranes. If he cannot sufficiently depress the uterus with the hand, he does not hesitate to forcibly drag it down by a double tenaculum fixed in the cervix. Mundé and Dr. E. H. Grandin, of New York, go still further, and currette the cavity of the uterus with special instruments made for the loosening of adherent placenta and its removal from the uterus. These curettes have no cutting edge and are applicable to cases where there is a large mass to remove, and where in consequence nearly always the cervical canal is open and will admit them. When dealing with shreds and the os is less patent, the dull curette of Thomas answers every purpose. They place the woman in the left lateral position and the removal is through a Sim's speculum. Dr. Grandin then directs, after the removal of the placenta, that the cavity of the uterus should be carefully dried by cotton applicator and tamponed by a slide applicator, the cotton on which has been saturated with the compound tinct. of iodine. The compound tinct. of iodine is used as a gentle styptic and disinfectant, or if there is much fetor iodoform is preferable. The authorities who counsel waiting for serious complications before interfering are just as many. We mention Ramsbotham, Davis, Burns, Fleetwood Churchill, Grailey Hewitt, Charpentier, and many others. Charpentier, in his *Cyclopædia of Obstetrics and Gynæcology*, says:

"If the woman miscarries in two stages, if the fœtus has been expelled and the placenta remains, what is to be done? Usually nothing: nature can do the work.

The placenta may remain days before being expelled; whilst there are no complications, wait at least till the placenta is engaged in the cervix and detached from the uterus, and then extract. If the placenta is not engaged and the cervix is closed, wait, and in case of hæmorrhage tampon, give ergot, never the ergot alone. If the placenta is still adherent, and is in part engaged in the cervix, give ergot, for the cervix cannot contract, since its canal is filled by the placenta. If the placenta is at the fundus and adherent, wait in case there are no complications, but interfere in case of accident. If it be hæmorrhage, the tampon and ergot. If it be putrefaction of the placenta, recognize this and extract at once; we must not hesitate, but we must immediately extract the placenta or secudines, and this, it is understood, is all the more difficult, the more completely the cervix has closed. If the cervix is permeable to the finger or instruments, the operation is easy. If closed, then we must dilate at once with sponge, branched steel dilators, or with Barnes' bags. Dilatation once accomplished, we must proceed to extraction, and this must be done by the finger or instruments, according to the case. He directs after the cervix has been dilated, and the woman on her back, to depress the uterus with the left hand as much as possible, and with the index finger of the right hand introduced into the cavity of the uterus, or as deep as possible, the adherent remnants are detached and brought away. If this does not suffice he resorts to instruments."

Septicæmia being one of the dangers from putrefaction of the retained placenta, how are we to recognize this. The first symptom is fetor of the lochial discharge. The discharge further loses its normal character and diminishes in quantity, becoming in color black or brown. It is no longer bloody or sero-sanguinolent, but is composed of reddish-black detritus, the debris of the retained mass, involution ceases and the uterus becomes sensitive to pressure. At times tympanitis supervenes with or without diarrhœa. The woman has chills. Sometimes the chills are violent and single, at other times many, separated by intervals of one or two days. There is fever, the temperature rising to 104°, 105° F. The pulse ranges to 120 or more. The temperature shows a marked remission, but the pulse remains high, and thus it may be day after day until the woman dies, or the fever may be continuous. The general condition alters for the worse. The eyes are sunken, anorexia and vomiting exist, the woman grows weaker, and if we cannot suppress these symptoms, dies of septic poisoning.

Has the physician any business to allow a woman with retained placenta to enter such a state as this? Is he doing his duty to sit calmly waiting for the onset of sepsis? He knows what he ought to do in case of sepsis, but action then, no matter how prompt, may fail, and the woman die of septicæmia. Then, as we cannot tell in any given case of retained placenta or secundines whether or not sepsis may develop, which is the wise course to pursue? To sit calmly waiting for the approach of these dangers, as advised by Charpentier, Ramsbotham, and others; or to act promptly, as advised by Mundé, Grandin, and others? I believe with Munde and Grandin, that active interference in the removal of the retained placenta is safe, easy, and forthwith guarantees the woman against sepsis. Active intervention does not mean unnecessary intervention. Nature is ever to be given a chance, but when we see her efforts are futile, certainly it is but rational to assist her, and this should be done as directed by Mundé and Grandin, by placing the woman in the left lateral position, and with a dull wire curette remove the placenta or any part of the secundines that may remain through a Sims speculum. This is far better and easier than the method advised by Simpson, of dragging or pressing down the uterus and introducing the finger into the uterine cavity. The uterine cavity should then be washed out with hot water slightly carbolized through a Jamson uterine douche, and repeated every six or eight hours until all fetor disappears from the lochial discharge.

I am painfully aware of the fact that a very large majority of physicians follow and practice the expectant or do-nothing plan, being satisfied with giving ergot and vaginal injections. It would doubtless be a surprise to many if we could ascertain the number of valuable lives that have been lost and the amount of suffering entailed upon women from the neglect of removing the retained placenta. Who of us with much experience has not seen such cases?

Shall we give ergot in retained placenta? This is another practice which should be relegated to the past. Engleman says never give ergot until the uterine cavity is cleared. The contractility evoked by ergot is notably different from that which is peculiar to the uterus; it is a species of tetanic contraction which, when it affects the cervix, not only

does not cause dilatation, but produces rigidity. Ergot may then act directly opposite to the end desired, and by interfering with dilatation of the cervix shut up the uterine cavity. Hæmorrhage after miscarriage, even when we believe the placenta and membranes have been removed, invariably means retention of a part of the placenta or secundines. Profuse hæmorrhage may occur for weeks from this cause. In such cases we should boldly explore the uterine cavity and remove any offending matter that may be present.

In the first twelve weeks of pregnancy, the dangers from hæmorrhage and septicæmia are not so great, and the expectant plan is more justifiable. After the third month it is criminal negligence to wait and subject a woman to the dangers arising from retained placenta, when she can be relieved by an operation, which, if properly done, can do no harm and spare her the risk of hæmorrhage and septic poisoning.

Again, with Mundé and Grandin, I repeat. The early removal of the secundines is easy, safe, and forthwith guarantees the woman against the dangers of hæmorrhage and sepsis.

It has been said that necessity is the mother of invention. I now show you an instrument improvised and made fifteen years ago by Dr. Thomas M. Woodson, of Gallatin, Tenn. As you see, it is simply a wire doubled and twisted together, leaving an open space at the end, as the wire is brought back. This opening is about one-half to three-quarters of an inch wide and two inches long, and is then again bent to resemble a spoon. This is as good a curette as Tieman can make, and was devised and used by Dr. Woodson to extract a retained placenta in a miscarriage of five months pregnancy. He has used this frequently and successfully, and in case of emergency it will answer every purpose. Some months ago I saw a lady who had miscarried at five months. Five days after the fœtus passed, a retained placenta was passed by the unaided efforts of nature; four days after this, I saw her in a dying condition with septicæmia. Was it proper to allow the placenta to remain such a length of time? Was this a wise course to pursue? Who can say: "This valuable life might not have been saved by the early removal of the retained placenta?" This case prompted me to present this paper for your thought and consideration.

TREATMENT OF POST-PARTUM ECLAMPSIA.

Dr. Strisover contributes a most interesting article on the treatment of post-partum eclampsia in a recent number of the *Journal de Méd. de Paris.* The treatment advocated by him, and used successfully in every case (ten) in which he has had occasion to try it, consists in hypodermic injections of the following solution:

℞ Chlorhydrate of Pilocarpine, gramme.....0. 05
Water.....4. 00

Each injection to consist of a Pravaz syringeful of the solution.

The author closes his article with the following conclusions:

I. Chlorhydrate of pilocarpine is undoubtedly a trustworthy remedy in post-partum eclampsia.

II. Cardiac weakness is not a contra-indication for the repetition of the injections of pilocarpine if the eclamptic spasms reappear.

III. A return of the pupils to the normal size is an indication that the morbid process has not yet been conquered, and that the convulsions are about to recur.

PÆDIATRICS.

ETHERIZATION IN CROUP.

Dr. F. Betz contributes an article to the current issue of *Memorabilien*, which, though founded on only one case where etherization was tried as a treatment for croup, is yet of sufficient interest to merit notice. He commenced by pointing out that in croup the tendency towards death is by no means commensurate always with the morbid condition of the larynx anatomically considered, the nervous system often playing a considerable *role*. The case he describes was that of a child thirteen months old, to whom he was called by another practitioner in order to assist in the performance of tracheotomy. The child was breathing with the greatest difficulty, expiration and inspiration being equally noisy; the hypochondriac regions were strongly drawn in at each inspiration, also the lower intercostal spaces anteriorly; the alæ nasi were working strongly, and the child kept clutching at its throat, where the larynx was very prominent, and at its ears, and twisting its head round as if there were both pain and a sense of obstruction. It would not drink or stay in bed, the face wore an anxious expression, and the head was retracted. No membrane could be detected in the throat, and there was no sound of air entering the lungs when auscultated from behind. On the left side

percussion was dull from want of expansion of the lung. Altogether the case was apparently hopeless. Notwithstanding the dangerous character of tracheotomy in children so young, preparations were made for its performance, when the writer suggested that ether inhalations should first be tried. A mixture was ordered of three parts sulphuric ether, one part acetic ether, and one-tenth part menthol, of which three drops were given as an inhalation on a folded handkerchief every quarter of an hour. The idea was by means of the vapor of ether and menthol to act on the mucous membrane of the larynx, which, as is well known, lies somewhat higher than usual in croup, and thus to contract the bloodvessels, to lower the temperature of the part, to decrease the œdema, to lessen secretion, and to allay the irritation in the larynx by the production of some amount of local anæsthesia. In addition to these, Dr. Betz had the further object in view of inducing partial general anæsthesia so as to give the child rest, and to allay the spasmodic contractions of the muscles connected with respiration. In a couple of hours a decided change for the better had taken place, the child being quieter, and some air evidently entering the lungs. The inhalations were continued, therefore, but at intervals of half an hour. Six hours later the respiration had become much less noisy, the contractions less, and the dyspnœa far less urgent, enabling the child to drink. The face had regained its proper color, and the child was apparently pretty comfortable, so that there was no longer any need to think of tracheotomy. The regular administration of the inhalation was stopped, but another mixture of somewhat similar character, containing three-tenths of a part of menthol, was ordered, in case of any recurrence of the alarming symptoms. Fortunately the subsequent progress was so uniform that no recourse to this was required. The object of increasing the menthol was to obtain greater refrigeration and to enable it to penetrate further into the air passages. The writer remarks that Trousseau used to prescribe chloroform inhalations in croup, but he is disposed to prefer his own mixture of ether and menthol. Whether such etherization has any power to loosen false membranes further experiments must show; but when tracheotomy or intubation is for any reason inadmissible in undoubtedly membranous croup, this treatment may, he thinks, very fairly be tried. The inhalations ought not to be continuous, but intermittent, and the medical man should for the first hour or two administer them himself.—*Brit. Med. Jour.*

HYGIENE.

PROGENY OF LEPERS.

In an analysis of 118 cases of leprosy in the Tantaran Asylum, in the Punjab, reported by Gulam Mustafa and read before the Epidemiological Society of London, by Dr. Phineas S. Abraham, we find the following relative to the progeny of lepers: Seventy-three of the total number appear to have been married before the onset of the disease, viz., forty-three males and thirty females; and whilst still in the healthy condition, the males are credited with seventy-one children, now or lately living, and in most cases free from the disease, and the females with sixty-five; total, 136. Only four females are stated to have given birth to offspring, five in all, after the disease had declared itself. Until recently, it was the custom to allow the patients to intermarry. Thirty-nine of those whose histories are recorded, viz., sixteen males and twenty-three females—availed themselves of the privilege, and seven of them married more than once; thus, one man united himself with no less than five leper wives, one after the other, and several other patients were married two or three times. Altogether, the number of marriages contracted by the men in the list amounts to twenty-six, and those of the females to twenty-nine. Only five of the men proved prolific, with a result of ten children and eight of the women with a result of fifteen children. Four of the children are dead, so that we have left twenty-one as the progeny of fifty-five marriages. As the notes give no information as to the names of the leper or lepers which each man or woman married, it is impossible to say whether the children and the marriages are not counted twice in the above collection. It is probable that the actual sterility is even greater than these figures indicate.—*St. Louis Med. and Surg. Jour.*

TRANSMISSIBILITY OF SYPHILIS.

As published in his magnificent *Atlas of Venereal and Skin Diseases*, Prof. Morrow's conclusions in reference to the hereditary transmissions of syphilis are:

1. A syphilitic man may beget a syphilitic child, the mother remaining exempt from all visible signs of the disease;

the transmissive power of the father is, however, comparatively restricted.

2. A syphilitic woman may bring forth a syphilitic child, the father being perfectly healthy; the transmissive power of the mother is much more potent and pronounced, and of longer duration, than that of the father. When both parents are syphilitic, or the mother alone, and the disease recently acquired, the infection of the fœtus is almost inevitable; the more recent the syphilis, the greater the probability of infection, and the graver the manifestation in the offspring.

3. While hereditary transmission is more certain when the parental syphilis is in full activity of manifestation, it may also be effected during a period of latency when no active symptoms are present.

4. Both parents may be healthy at the time of procreation, and the mother may contract syphilis during her pregnancy, and infect her child in utero. Contamination of the fœtus during pregnancy is not probable if the maternal infection takes place after the seventh month of pregnancy.

MEDICAL CHEMISTRY.

SOLUBILITY OF IODOFORM IN OLIVE-OIL.

The solubility of iodoform in the fixed oils is stated somewhat variably. Squire gives 1 to 30 of olive-oil; Martindale "1 in 60 of vaseline and oil of almonds, and about the same in fats and other fixed oils." F. Klingmann (*Apoth. Zeit.*, 1891, 70) has recently determined the factor with care. Five grammes of iodoform were added to 30 grammes of olive-oil, the whole been shaken for twelve hours by means of a small turbine. Then it was filtered, and the saturated oil was found to contain between 2½ and 3 per cent. of iodoform. With due allowance for specific gravity, this shows the solubility of iodoform to be 1 part in 39 fluid parts of olive-oil.

UROLOGY IN CONNECTION WITH INFANTILE DISEASES.

Albuminuria.—The citro-picric acid reagent of Esbach is approved. First, filter the urine, then pour a few centimeters of it into a tube, and then an equal quantity of the reagent. If there is albumen the mixture will become opalescent, or there will be a precipitate. Frequently it may be necessary to reach the boiling point before the precipitation will take place. Examinations for albumen were made in two hundred and fifty cases. In twenty-seven cases of pneumonia and broncho-pneumonia, albumen was found in large or small quantity. Albumen is usually associated with febrile oliguria; it disappears with defervescence and increases in the urine. It is a characteristic of all infectious diseases, though the rule is less absolute in children than in adults. In measles, albuminuria was present in 33 out of 34 cases, in scarlet fever in 34 out of 43, in erysipelas in 4 out of 5, in febrile roseola in 1, in typhoid fever in 5, in diphtheria in 36 out of 40; it was absent in 1 case of mumps and 2 of false croup. Albuminuria is transitory and not intense in most diseases with the exception of diphtheria, though in scarlatina it is present in a serious and rather permanent form in the secondary nephritis, which may occur as a complication. The albuminuria of diphtheria has no relation to the existence or intensity of the fever. It is present in fifty to seventy-four per cent of cases. In 10 cases of pulmonary tuberculosis albuminuria was present in 5, and in 4 out of 6 cases of tubercular meningitis. In 6 cases of whooping-cough it was found only once, in 1 case out of 3 of athrepsia in very young children, in 2 out of 3 cases of scrofulous cachexia with adenitis, in 1 case of acute perityphlitis, and in 1 of extensive burning. In 21 cases in which there was suppuration, especially in connection with carious bone, there was albumen in 11. Of 27 cases of nephritis, 21 occurred with infectious diseases, and 6 as chronic nephritis.

Peptonuria.—The peptones are hydrated albumens, soluble in water, diffusible, dialyzable, and not precipitated by heat, nitric acid, ferro-cyanide of potash, and acetic acid. They are easily precipitated by most of the reagents which precipitate the alkaloids, the precipitate being redissolved by heat and reappearing with cold. The reagents which are most frequently employed are phospho-tungstic acid, phospho-molybdic acid, tannin, iodo-iodurated solutions, iodo-mercuric and citro-picric solutions. The search for this substance is made in the same way as for albumen. If a precipitate is obtained it may consist of albumen, peptones, alkaloids, or urate of sodium. If it should be albumen, it will not be dissolved when heat is applied. If it should consist of alkaloids or peptones, heat will dissolve it, but the alkaloids, and quinine in particular, will respond to particular reactions for such substances. The acid urate of sodium forms a finely granular precipitate

which appears more slowly than a precipitate of peptones; the latter will also give an opalescent appearance.

If there is any doubt remaining, it may be settled by the murexide test. If the urine is albuminous, the albumen may be eliminated by Hoffmeister's method. Eichwald and Gerhardt were the first to determine the presence of peptonuria, in cases of pneumonia, diphtheria, phosphorus poisoning, tertiary syphilis, petechial typhus, and dothinenteritis. Jaksch discovered it in certain conditions in which there was change in the blood, scorbutus being one of these conditions. In the general infectious diseases it is usually absent. Peptonuria has been divided into the following groups: nephrogenic, pyrogenic, puerperal, hæmatogenic, enterogenic, hepatic, and urogenic. The blood normally contains no peptones, hence its presence indicates a non-assimilable material which the kidney should eliminate. Peptones were sought by the author in 248 cases of disease in children, and were found in 34. It was found in 5 cases out of 28 of pneumonia and broncho-pneumonia, in 1 case out of 2 of purulent pleurisy, in 1 case of severe febrile roseola, in 10 cases out of 37 of diphtheria, in 3 cases out of 21 in which there was suppuration, in 1 case out of 6 of athrepsia, in 13 out of 23 of nephritis. In the 34 cases of peptonuria there were 32 in which there was also albuminuria. The methods of investigation now in use are not yet sufficiently exact.

Diaceturia.—If to normal urine a solution of perchloride of iron is added, there will be a precipitate of phosphate of iron; if perchloride of iron is still added, the precipitate will be dissolved and the urine will assume an amber color, or, in other cases, the color of red wine, which will become less marked by boiling, and will disappear if acids are added. These reactions will not take place if the urine is first submitted to prolonged boiling. Jaksch considers this reaction due to aceto-acetic acid or its ethers, and he has given the name diaceturia to the elimination by the urine of its acetic acids, its salts, and its ethers. He has determined its presence in diabetes and in several febrile diseases, and has also found that it might exist as the expression of a particular auto-intoxication. Febrile diaceturia is of frequent occurrence but is not of serious prognostic significance.

In diabetes it is a grave symptom, and frequently announces the advent of coma. In 150 examinations the author determined diaceturia in 69. It was found 19 times in 23 cases ot pneumonia and broncho-pneumonia, in 16 out of 26 of measles, in 27 out of 34 of scarlet fever, in 4 cases of erysipelas, in 11 out of 31 of diphtheria, in 2 out of 13 cases of suppuration, in 2 out of 4 of typhoid fever, in 2 out of 4 of tubercular meningitis, in 1 of acute perityphlitis, in 1 of extensive burning, in 2 out of 15 of acute nephritis, in 1 of solid tumor of the iliac fossa. Diaceturia may be considered as of frequent occurrence in infectious febrile diseases, and particularly in scarlet fever. It occurs exceptionally in uncomplicated diphtheria.—Binet's—*Rev. Mens. Mal. Enf.*

NEWS AND MISCELLANY.

Result of Koch's Treatment.—According to the *British Medical Journal*, 708 cases have been treated in external tuberculosis, 15 cured, 148 substantially improved, 237 improved, 298 unimproved and 9 died.

MODERN DISCOVERIES OF NEW CURES.

With painful and patient pen we record the birth of a new treatment for phthisis, the sixth in four months. The hopeful author and discoverer this time is Dr. Tranjen, of Sistow, Bulgaria. He doesn't seem to have any front name, but that may be the fashion in Sistow. Professor Dr. C. A. Ewald writes a supplement to Dr. Tranjen's communication and also publishes the details in all their rosy tabulated promise in the *Berliner Klinische Wochenschrift*, an organ for practical doctors. The refrain which Dr. Tranjen plays upon Professor Ewald's organ is like that of other discoverers. We are having prepared a lithographed form for the benefit of future ingenious therapeutists in this same line. It will read like this:

"*Form* I.—Dr. —— has discovered a new remedy for phthisis. He reports . . . cases. The results have so far been very satisfactory. In early stages it produces decided improvement and sometimes cure. In later stages it does not do so much good, but sometimes causes remarkable improvement before the patient ultimately dies. Dr. ——'s new treatment promises to be a useful addition to our therapeutic armamentarium, and deserves further trial."

We shall be very glad to furnish "discovery blanks" of the above type to our clinical workers.

But meanwhile we had almost forgotten to say that Dr. Tranjen's new discovery consists in the hypodermic injection daily, for seven to ten days, of a solution of thymolo-acetate of mercury, at the same time giving the patient iodide of potassium. The results are accurately described in Form I, as given above.—*Med. Rec.*

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Clinical Lecture.

SYPHILIS WITH LESIONS OF THE HEART AND KIDNEYS.

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This is not an easy case to diagnose by exclusion, and I shall, therefore, go directly to the ultimate cause of his difficulty and then we will try to account for his more immediate troubles.

A few months ago, this man acquired syphilis, and he is now suffering with the secondary manifestations of that disease, feverishness, weakness, mucous patches in the mouth, and specific pharyngitis and laryngitis. You have seen him in the wards and you understand that while these are manifestations of importance, they are conditions that can usually be readily relieved by the use of mercury, and the symptoms pass off under a careful administration of this drug in a comparatively short time, particularly if the patient is, at the same time, well cared for, well fed, not allowed to worry, not allowed to drink alcoholic beverages, and compelled to keep regular hours. Under this treatment the man has done badly, he very soon showed tenderness of the gums and salivation, so that the mercury had to be withdrawn, and his throat trouble became worse. Then mercury hypodermically was tried and injections of the bichloride were made once daily until the effects in the mouth were shown and then it was discontinued to be tried again after three or four days. Once in two or three days is often enough for hypodermic injections of mercury if you use large enough doses. We used in this case one-eighth of a grain daily. You may give a half a grain and allow two or three days to elapse before the next dose. Under this treatment the man has gotten the good effects of mercury but he has had considerable throat trouble, and one night he had indications of œdema of the glottis, a croupy cough, the symptoms of laryngismus stridulus, and we felt it necessary to have means at our disposal for relief if the condition became worse. The O'Dwyer tubes were put in readiness, but under the use of an alkaline steam-spray, he improved, and, while he is yet voiceless and yet suffers to some extent from cough, he is decidedly better. Not getting any relief for his throat symptoms by the use of Gross's mixture, which we gave first, nor by the use of mercury hypodermically, I began giving him mercury in the form of the green iodide by the mouth, and under that, I think, he is doing better, so far as his throat is concerned, than he did under the hypodermatic use of mercury—a matter of therapeutic interest because it is contrary to what is generally stated in regard to the relative value of different modes of employing mercury.

I bring the man before you this morning, not in regard to his ultimate disease, but on account of certain manifestations of the disease in the viscera. He is very anæmic; he is eating and digesting very little. He has great prostration and I discovered some time since that he had a curious pulse. It was a pulse suggesting the Corrigan pulse and yet not well enough sustained in the beginning to make a true Corrigan pulse. It was frequent, very compressible and vibratory. My attention was naturally directed toward the heart and I found that the man was suffering from a present endocarditis which showed itself by the soft bruit, the somewhat tumultuous action of the heart as well as the curious character of the pulse. This endocarditis was located in the left side of the heart where it almost invariably occurs in adult life, and affecting especially the mitral and aortic orifices. Later I found that this man was suffering from œdema. His hands are somewhat puffy, the fingers seem large

in proportion to the size of the hand and the skin is distended and glossy. Before saying that this was the result of the disease of the heart alone, I asked that the urine be examined with a view to learning whether there was also kidney disease present and it was found that there was a large amount of albumen in the urine. We have here not only secondary syphilis with serious throat trouble, but a present endocarditis and nephritis. The form of nephritis which he has, I cannot state to you without making a careful microscopic examination of the urinary sediment, estimating the urea, studying the relation between the quantity of urine and the albumen, but in all probability it is an acute desquamative nephritis, coming on, as the heart trouble has come on, since his entrance into the hospital, and, therefore, secondary to the attack of syphilis. Why do I make a diagnosis of *acute desquamative* nephritis? The large amount of albumen and the brevity of the duration of the symptoms make me think that the case is an acute one, and if so, it is probably of the parenchymatous form.

Let us look at the patient generally, before we study more carefully the condition of his heart and kidneys. The œdema is seen very plainly in his legs, his feet are swollen and are quite red, showing a congestion which is unusual in œdema. There is no dermatitis, either simple or syphilitic and it is not a temporary condition, due to the recent application of heat. The congestion of the capillaries is probably due to some affection of the sympathetic system.

The œdema is undoubtedly due to the heart and kidney lesions. The state of the blood might add to the condition. You may ask if the liver may not have something to do with causing the œdema. That is possible, although general anasarca we refer, as a rule to disease of the heart, kidneys or blood. Dropsy due to the liver, is usually an ascites, and not a general anasarca, unless the hepatic trouble acts to interrupt the general circulation in some very marked way, or unless it gives rise to serious blood changes such as take place in cancer of the liver. An acute neuritis might give rise to an œdema, but our patient has no evidence of neuritis. Anasarca may also be due to the obstruction of the flow of blood through the lungs by disease of the lungs, but this man shows no further trouble in the lungs than the overfilling of the vessels with blood, which is readily explained by the heart disease.

The endocarditis, being acute, will probably get better in course of time; just how much deformity of the valves will remain, it is impossible to say. The apex-beat is in the fifth intercostal space, about an inch and a quarter below the nipple and a trifle to the right of the nipple line. At the apex I find a bruit which precedes the ordinary systole of the heart, and is, therefore, a presystolic bruit. It is accompanied by a considerable thrill at the apex and just above it. The presystolic sound is heard in the same locality with the greatest intensity. It is caused by an obstruction and narrowing of the mitral orifice due to swelling, possibly œdematous, of the leaflets of the valve. If the man improves, this condition may entirely subside, or it may leave behind a permanent narrowing of the mitral orifice. It may leave merely a shortening of the valves and an insufficiency. There is also a systolic bruit. The presystolic bruit ends in the systolic bruit in the somewhat excited state of the heart at present. The blood is forced down by the contraction of the auricle making the presystolic sound and, on account of the insufficiency of the valve, some of the blood is immediately returned by the contraction of the ventricle giving rise to the systolic sound. Both the presystolic and the systolic sounds are soft and cooing in character, and when the patient is lying down at rest there may be heard very distinctly, three sounds at the apex instead of two. The first two sounds come nearer together. The first sound is the murmur produced by the contraction of the left auricle; the second the regurgitant murmur produced by the contraction of the left ventricle, and the third sound is the ordinary second sound of the heart caused by the closure of the aortic valves. None of the heart sounds have their natural accent, they are all obscure and have a certain bluntness, a certain muffled character which is the result of the œdema, which is present in the heart. The systolic sound is carried upward and to the left as we would expect, and, while I can not hear the sound behind, it is simply because it is not distinct enough to be propelled to that distance.

The man has also disease at the aortic orifice and that I know by the character of the sounds at the base of the heart. There is heard, with the first sound of the heart, a soft bruit, which travels upward into the vessels of the neck and which is also muffled and obscure. The second sound of the heart is nearly normal. There is a sharp accentuation to it now because the man is somewhat excited and his arterial tension is

higher than normal. When he is in bed this sound, too, is muffled and with it there is a slight murmur of insufficiency. He has disease at the mitral and aortic orifices, both obstructive and insufficient in character, which may be entirely temporary, which is produced by an acute endocarditis and also by a profound anæmia which causes softness and relaxation of the cardiac tissues.

This man has an acute inflammatory degeneration of the kidneys as the result of syphilis. I have no doubt of the syphilis possibly involving the blood-vessels of the kidney, and also directly attacking the epithelium and giving rise to a cloudy swelling and softening and desquamation of the epithelium. Tube casts are produced, epithelial, hyaline, granular and, probably, to a certain extent blood-casts. The amount of urine is doubtless small and the urea is decidedly diminished. Those waste products which are normally formed in the blood and which are formed to an abnormal degree in this man's case, are not thrown off properly by the kidneys and the man has a uræmia, strictly speaking, and other toxæmias also.

What are we to do for the patient? We must deal with the cause certainly. The syphilis must be treated and the most important remedy in the treatment of the secondary stage of syphilis is mercury. He does not bear mercury well and he already has the mercurial breath which you will learn to recognize instantly so that you can tell it on first entering a house in which there is a patient with mercurial stomatitis. It is my belief that we will have to overcome the syphilis by the moderate use of mercury. It does no good to force mercury beyond the point of tolerance. The present tenderness about the teeth will pass away in a few days and we must continue with such a dose of mercury as to keep his gums slightly tender.

We must attend to his fever and relieve it, especially by baths. We must nourish most carefully, avoiding alcoholic stimulants if possible. The patient's diet will be chosen from the following list: milk, eggs, peptonized beef, peptonized milk punches with just enough whisky to give a flavor, oyster broth or oysters themselves peptonized, forcing nutrition as far as we can.

The utmost attention must be paid to the bowels. While we are doing this we must bear in mind that what he takes must come out of him in some way. If he takes food and it is assimilated, it passes into the blood and the waste products from the blood pass out chiefly through the kidneys normally, but in his condition, the waste products will not pass off through the kidneys. This is one of those cases which tax the skill of the physician and on which physicians so often go wrong. We must treat this man as being sick, as having syphilis, as a patient with Bright's disease, not forgetting that he has a heart trouble.

How shall we treat him for the Bright's disease? Would there be any objection to giving this man vapor baths to stimulate the skin to the utmost and thus get rid of the waste and relieve the kidneys? There is only one objection to that and that is the possible effect on the heart. I shall put this patient upon a treatment of the skin by diaphoretics and diaphoretic measures rather than diaphoretic drugs. He shall have sweats, he shall be kept still in bed, we will try to unload this accumulation of fluid in the subcutaneous tissue and when we get rid of the œdema, we shall know we are helping the kidneys. In the meantime, is it right to force the nourishment as hard as we can? No, we must not force the nourishment till we can provide for getting rid of the waste. The first thing to be thought of after the mercury is not so much forcing nutrition as looking after the kidneys. Many a case of Bright's disease is lost for the reason that nutrition is looked after to the conclusion of the waste products.

With reference to the heart. It is not always a good plan to produce diaphoresis and relaxation of the skin when the heart is weak, because thereby, blood pressure is lowered and the patient feels the worse for it. I should, however, advise moderate diaphoresis here for reasons already stated and should attempt to sustain the heart by cardiac tonics. The heart tonics are in no way antagonistic to syphilis and some of them are irritating to the kidneys. In this form of Bright's disease, by maintaining the blood pressure, we shall relieve to some extent the congestion of the kidneys and we shall enable the urine to pass out in larger quantities and get rid of urea and other toxic principles in large measure. What heart tonic shall we administer in this case? I should say digitalis in the form of the infusion given in teaspoonful doses and repeated every three or four hours, gradually increasing it if necessary till we have a steady quiet action of the heart and at the same time keeping up the diaphoretic measures.

If his urine is at all irritating owing to

the large amount of acid it contains, I should give him alkalies. An alkaline diuretic is the only one that should be given in a case of acute Bright's disease. Stimulating diuretics are altogether inadmissible since they irritate and damage the kidney. Potassium acetate or a mixture of potassium nitrate, sodium bicarbonate and the double tartrate of potassium and sodium given twice a day will produce alkalinity of the urine quicker than almost any other combination.

If we find that the urine is still scant in quantity, that the amount of urea given off is very small, we will often afford greater relief by giving the acetate of potassium than by giving this alkaline mixture.

Such patients are disturbed by iron. The liver is irritated, the appetite is diminished, the patient becomes despondent and depressed by the use of iron. When his digestion is restored to normal, I should give iron in the form of the tincture of the chloride. In cases of rather chronic Bright's disease, the acid preparations of iron are more useful than the carbonate, albuminate or the other preparations which we select in common cases of anæmia. We may give him bitter tonics, such as quinine and strychnine by and by.

So far as the fever is concerned, aside from the baths already mentioned, we will control that entirely by the diaphoretics.

CHRONIC PHTHISIS.

BY R. C. M. PAGE, M. D.,

PROFESSOR OF DISEASES OF THE CHEST AND GENERAL MEDICINE AT THE NEW YORK POLYCLINIC—VISITING PHYSICIAN AT THE NORTHWESTERN DISPENSARY, ETC.

Gentlemen:—The patient I present to you this morning is a man 47 years of age, who is a laborer by occupation. He was, he says, in good health up to a period of some sixteen months ago, when he began to have a cough, and to lose flesh and strength. He has now some dyspnœa and nightsweats.

As you look at this man and listen to the tone of his voice your suspicions are at once directed to either tubercular or syphilitic laryngitis as present in his case. We suspect, from the subjective symptoms of the patient, as related by himself, that he has phthisis, but to what stage this disease has progressed in his case, physical examination will alone enable us to determine.

Phthisis, as now generally understood and accepted by the profession, not only means tuberculosis, but it also signifies pulmonary tuberculosis. It may be acute or chronic, but whatever form it may assume, whether it be slow or rapid in its progress, it is in every case tubercular.

Acute phthisis may commence as a lobar pneumonia, and instead of resolution taking place, as usual, there are signs of softening in the lungs, followed by excavation, rapid emaciation and death in the course of a few weeks. Acute phthisis may also be a part of that form of the disease known by the name of general tuberculosis, affecting the various organs and tissues of the body at the same time. The physical signs of pulmonary disease are those of bronchitis. This disease is nearly always secondary to some tubercular lesion from which the bacilli are absorbed into the blood, the circulation of the blood in the lung favoring their lodgment in that organ, as the tubercle bacilli do not proliferate readily in the circulatory fluid.

Chronic phthisis may be reduced to two varieties, though variously described under different forms, and these two varieties are known by the name of the catarrhal and the fibroid. Catarrhal phthisis is that form of chronic phthisis most frequently met with in practice, and usually appears at the apices of the lungs. It begins in the apices of the lungs, because those parts are the most liable to traumatism from exposure, and injury to the vessels from imperfect circulation and stagnation of blood. There is also less respiratory motion in this portion of the lung and consequently imperfect ventilation, and less tendency to the absorption of exudation and disturbance of the bacilli.

Fibroid phthisis, the second variety of the chronic disease, is in reality a tuberculous interstitial pneumonia. Like chronic interstitial pneumonia, it leads to bronchiectasis and shrinkage. Before the discovery of the bacillus by Koch, in 1882, chronic interstitial pneumonia and fibroid phthisis were regarded as the same disease. After the discovery of the bacillus these two diseases were separated, one being considered as a form of phthisis, and the other as a chronic pneumonia.

There are, as you know, three stages of phthisis, and a thorough appreciation of these three stages is essential to a knowledge of what you can do for your patient. To this end it is well, then, for us to determine the earliest signs of phthisis. What, then, are the earliest signs by which we can recognize this disease? If the top of the left lung be

affected, it is easier to make an early diagnosis than if it be the top of the right lung, since in health the patient has exaggerated fremitus and pectorophony on the right side, as well as slight dullness on percussion and rude respiration.

Frequency of the pulse and loss of appetite are also among the earliest signs of phthisis. But shall we rely in this connection upon the discovery of the bacillus in the sputum? Or are we justified in waiting before resorting to improved methods of treatment until we find this micro-organism? Unquestionably no. The cough of chronic phthisis is at first dry and hacking. Expectoration is scanty, and even that does not contain the bacilli, as a rule, because these bacilli are few in number and are not readily removed by expectoration. Furthermore, every general practitioner has not the means or opportunity of determining the existence of the bacilli in the sputum, even if they could be found.

Now the question comes up for consideration how are we to determine the present condition of this man? and to that end let us see what conclusion we can reach in the way of diagnosis by a physical examination of his chest.

First, on inspection we notice that the chest is more or less retracted on the right side in the neighborhood of the clavicle, and the heart is somewhat displaced to the left. In perfect health we know that the apex of the heart ought to be normally about 1½ inches below, and somewhat within the line of the left nipple. This is, however, a very uncertain landmark for us to follow. It is a safer guide for us to find the middle point of the clavicle, and a line dropped from this point will determine the nipple line in health. Now, what has caused this man's heart to occupy this abnormal relationship? Pleurisy with effusion would tend to produce this condition; enlargement of the liver and spleen would cause an upward displacement of the heart; enlargement of the heart itself would also tend to displace that organ; but in this case we conclude from the physical signs present that this displacement of the heart is due to contraction from pleuro-pericardial adhesions. On inspection, we notice the apex beat of the heart carried outward from such causes.

After inspection we come to palpation, and note the amount of vocal fremitus present over this man's lungs. We get no vocal fremitus in this case from impairment of voice, but as we ask the man to cough we get more tussile fremitus over the left side than we do over the right. Fremitus is increased in two ways, by consolidation of lung tissue, or by connection along the tubes.

After palpation, we come to percussion. If this man were in a state of perfect health, you would get a slight difference in the percussion note over the right and left lung. In the case of right handed people we get a little more dullness over the right lung and *vice versa* on account of the difference in the thickness of the muscles. On percussion we get marked dullness over the left lung, as compared with the right in this man's case.

From these physical signs we can, therefore, conclude that there is something wrong with this man's left lung. There is present there, more or less consolidation of the lung tissue, and a thickened pleura.

This now brings us to auscultation and this subject brings up the question, What do you listen for when you place your ear to a chest like that? You are simply listening for the respiratory murmur, and this respiratory murmur may be vesicular, bronchial or cavernous breathing. Having satisfied yourself about the character of the respiratory murmur and the vocal resonance, we listen lastly for what are called adventitious sounds, viz., sounds produced in the chest by disease. Of these adventitious sounds there are three classes, viz., râles (rattles), frictions and splashing. We have three varieties of râles, dry, moist and indeterminate.

As I listen over this man's chest under the left clavicle, I get on auscultation the physical signs of a cavity. When we percuss over a cavity, we get dullness as a rule, but in certain exceptional cases we may get tympanicity. In the third stage of phthisis, the pathological lesion is generally a complicated one, and you are likely to have fluid in the cavity, a thickened pleura, and other morbid conditions that go to produce dullness on percussion.

Having now gone over this case thus briefly, and having decided upon the diagnosis of phthisis as the cause of this man's trouble, the question comes up, What can we do for him in his present condition? The treatment of phthisis to-day, it must be borne in mind, is still purely symptomatic. We do not use depleting remedies now, as formerly, but we nourish the patient as well as we can. Keep him in the fresh air, give him plenty of milk, cod liver oil, and easily digested food, and treat each symptom as it develops. Filleau thought that he had dis-

covered the cure of phthisis by injecting carbolic (phenic) acid into the patient's body, to be exhaled by the lungs. Seiler claimed that hydrofluoric acid fumes did the same thing. Then came the Bergeon method. Iodoform, arsenic and creosote have all been tried, but without avail. However useful they may be, no one claims that they can cure phthisis. Recently, the whole world has been moved by the well-known discovery of Koch. Sufficient time has not elapsed to pass upon the therapeutic value of this discovery in the cure of phthisis. But, supposing all is true that is claimed for it, the importance of an early diagnosis, and the prompt application of the remedy is at once apparent.

Now there are certain complications that may arise in the course of phthisis which it may be well for you to know how to treat promptly and efficiently, for these complications may sometimes exhaust our patient's strength to such a degree as to utterly defeat any measure of relief or comfort he may be otherwise likely to obtain. Of the complications that attend phthisis, perhaps the most alarming and, and at the same time, the most dangerous is hæmorrhage. Suppose you were treating a patient in this stage of phthisis who was troubled with hæmorrhage. What would you do to arrest it? You may have a profuse hæmorrhage from the lungs before any physical signs of pulmonary phthisis present themselves. This may be the first objective sign of phthisis that you get, and it is usually a very bad sign. At other times, during the progress of the malady a large artery running across a cavity may rupture and give rise to a profuse hæmorrhage by aneurismal dilatation. Now, every one has a different remedy for hæmorrhage in phthisis. It is well to have but one, and that a safe and ready one. Ergotine with morphia is the one remedy I would recommend you to use for this pathological condition, and you will generally find it very efficient.

Ergotine acts by contracting the fibres of the capillaries, but how morphine acts in this connection I am unable to say, but I know from clinical experience that it does good, it allays nervousness, keeps the patient quiet and prevents restlessness. We know in intestinal hæmorrhage due to typhoid fever, morphine stops peristaltic action of the intestine and favors the formation of a clot.

I saw lately at the Brompton Hospital in England, a case of pulmonary hæmorrhage where everything was tried in vain to stop hæmorrhage in a patient with phthisis and the physician in charge had finally to have recourse to morphia to keep the patient quiet, and 1-3 grains of ergotine hypodermically. This succeeded in arresting the hæmorrhage. Twenty-five years ago at Bellevue Hospital the drinking of a saturated solution of common salt was used with very good result in arresting the hæmorrhage of phthisis, and Dr. Alonzo Clark used to say if that remedy did not stop hæmorrhage from the lungs nothing will. How does salt and water act in this connection? Salt simply acts by drying up the blood, and as it is well to have a reason for everything we do, I give you this reason for the use of salt in pulmonary hæmorrhage.

There is another complication of phthisis I wish to speak to you to-day about, and that is night sweats. These night sweats, we know, weaken the patient considerably, and are a very distressing symptom to have. I wish to tell you that because your patient is in the third stage of phthisis, it is no reason why you should abandon him hopelessly. I have seen such people, when sent to a suitable climate, do very well indeed. When a patient has night sweats, you must do something to stop them, but what medicine are you to give to produce this effect? It is a common practice with dispensaries in this city to give one dram of the tincture of belladonna, in a two ounce mixture of Stokes's expectorant, for this purpose. In private practice it may not be desirable to give this remedy, as it has a tendency to produce hoarseness in your patient, and this is a rather unpleasant thing to happen. I had a very bad case of night sweats in a private patient the other day and the very first dose I gave of this mixture stopped them at once. If this remedy should, however, fail in arresting these sweats, then you may try agaricin in doses of ½ of a grain three times a day and increase this amount till you have given the ¼ of a grain three times a day; or better still give your patient the oxide of zinz according to the following formula:

℞ Pulv. zinci ox.....iij gr.
To be taken on going to bed at night.

These three remedies are the most efficient that I know of in arresting the night sweats of phthisis.

There is another good thing about the use of balladonna in this connection, and that is in all cough mixtures for the relief of phthisis we have to give opium to a greater or less

extent. Belladonna mixed in with the cough mixture containing opium counteracts the bad effects of the latter drug.

There is another point I wish to speak to you about in this connection, which may prove to you of some practical interest, for though phthisis is a pretty threadworn subject, I think we can learn something new every time we go over this matter. Suppose your patient has a hectic fever every afternoon, how are you going to treat this complication satisfactorily? Hectic fever, you know, is a very disagreeable complication in the course of phthisis, it keeps your patient emaciated, ruins his appetite and renders him absolutely uncomfortable. I remember the time when these patients used to be given quinine in very large doses for this condition, but without producing any good effect whatever. Quinine will not lower the temperature to any appreciable extent in phthisis, pneumonia, pyæmia, or any other similar affection. It is, besides, a very dangerous drug to use in large doses, as I have seen it given in the case of phthisis. Antipyrine is a good remedy to employ for reducing temperature but it produces diaphoresis in your patient, and that is a condition you do not want to develop in a patient with phthisis. Antifebrine is a better remedy to employ for reducing temperature in these cases, as it does not give rise to so much diaphoresis as does antipyrene. By giving five grains of antifebrine in the form of tablets, in the afternoon, at about one o'clock, and five grains more at five o'clock in the evening, your patient will be enabled to spend quite a comfortable night. It is a rule at Bromptom Hospital to let the temperature alone unless it went over 102° F., though I often bring it down below 101° F., because such a temperature as that gradually exhausts your patient's strength and vitality.

You should not forget to supplement this treatment, as I have now outlined it to you, by sending your patients to some climate where they can pass the greater part of the time out of doors in the open air.

Goldbeater's Skin for Cracked Nipples.

M. J. Blechmann (*Paris Médical*) advises the treatment of cracked or fissured nipples by means of goldbeater's skin. Over the nipple affected after wetting with simple clean water, there is applied a round piece of goldbeater's skin, of about ten centimetres in diameter. The center of the skin is first pierced by a number of fine holes with a needle. The skin takes the form of the nipple and adheres like a second epidermis. It should then be moistened and after each nursing a new piece applied.—*Ex.*

COMMUNICATIONS.

CARIES OF COSTAL CARTILAGE FOLLOWING ENTERIC FEVER—PERSISTENCE OF SINUS AFTER OPERATION—TREATMENT BY METHYL-VIOLET—CURE.

BY J. C. WILSON, M. D.,
PHYSICIAN TO THE JEFFERSON HOSPITAL, ETC.

The following case is briefly reported, (1) as an example of a sequel of enteric fever rare in this country though relatively frequent in Europe, and (2) on account of the result of the treatment:

A gentlemen 32 years of age consulted me on October 9th, 1890, in regard to an open sinus in the lower part of his right chest, near the mammillary line.

He stated that during the summer of 1889 he had, suffered from a severe and unusually prolonged attack of typhoid fever, from which he had, however, made as regards his general health, a satisfactory recovery.

In the early days of his convalescence he had experienced distressing pain, localized in the lower part of the right chest. The painful area was extremely tender upon pressure. In the course of a short time an abscess formed at this point which ruptured spontaneously. The resulting sinus refused to heal and continued to discharge a small amount of thin pus.

The diagnosis of caries of the cartilage of the rib was made and some months later an operation was performed. This procedure, however, failed to give relief, and the sinus continued to discharge thin pus as before, though in smaller amounts; its outlet occasionally closing, only to reopen in the course of a few days under the pressure of the accumulated secretion.

Upon examination the opening was found to be surrounded by pouting granulations; it was somewhat retracted; the neighboring tissues for a distance of an inch or two were infiltrated; the skin congested and bluish.

A probe introduced, passed in a direct course upward and backward a distance of about an inch and a half. Being introduced with the tip bent, it passed behind the cartilage of the sixth rib near its costal articulation. The cartilage was distinctly felt to be roughened.

The patient stated that he had recently been advised to have the affected portion of the cartilage excised. In this I fully concurred. Upon further conversation, the

patient's disinclination to an operation being very great, I proposed the treatment of the wound by methyl-violet, a small quantity of which had been sent me a few weeks before by Dr. Johnstone of Brooklyn who had received it directly from Professor Stilling. It was agreed that the patient should regard this as a clinical experiment.

A small quantity of a five per cent. aqueous solution of the blue pyoktanin was injected by means of a curved dental syringe introduced to the cul-de-sac of the sinus behind the cartilage. Upon the withdrawal of the syringe, the orifice was closed by a pad of absorbent cotton which was held in place by strips of adhesive plaster. This maneuvre was repeated on five occasions, at intervals of three or four days. During this period the infiltration of the skin surrounding the fistula rapidly diminished; the neighboring skin lost its livid hue; the pouting granulations underwent resorption and the discharge practically ceased.

Two weeks after the last injection, namely on the 17th of November, the patient returned. The sinus had closed; the infiltration had disappeared and the slightly indurated, but healthy cicatrix alone remained. A distinct loss of the substance of the cartilage, or its inferior border could be felt. Whether this was the result of the caries or of the scraping at the operation, cannot be determined.

To-day—May 25th, 1891—the patient reports that he has had no further trouble. The cicatrix is thin, pliable and movable.

I desire to call attention to the fact that the solution of methyl-violet used in this case was very much stronger than those usually recommended, and to the fact that the outlet of the orifice was immediately closed by a small pad of tightly rolled cotton with a view of retaining the solution in contact with the walls of the sinus.

The treatment was almost painless, and resulted in a cure which now promises to be permanent, without the loss of a single hour's time on the part of the patient, and without the annoyance incident to a surgical operation.

In view of these facts the treatment of small sinuses, resulting from carious processes, by strong solutions of methyl-violet should be tentatively instituted as a preliminary measure prior to a surgical operation.

Maygrier reports an instance of a female fœtus weighing thirteen and a half pounds. Its total length was 58 cm.

REPORT OF A CASE OF FIBRO-PAPILLOMA OF THE BLADDER, WITH RECOVERY.

BY D. W. CADWALLADER, M. D.,

GYNÆCOLOGIST TO ST. AGNES HOSPITAL, PHILADELPHIA.

M. Q., age 30, was admitted to St. Agnes's Hospital, November 20th, 1889, with the following history:

Has been married 13 years and given birth to eight living children; labors all easy; made good recoveries and never had any miscarriages. In March, 1889 her "sickness" ceased and did not return until June, when she began to have "bearing down" pain and a slight discharge of blood each day. This continued up to August 10th, on that day she passed a mass, which on examination by her, proved to be clotted blood; a similar clot was passed a week later, and about this time she began to have occasional hæmorrhages, which were profuse and which continued to present date; has had over thirty in all, and lost as much as a pint and a half of blood at one time. All this time (from March until June) she had no signs of pregnancy other than a cessation of the menstruation.

On admittance she was extremely faint from loss of blood; was terribly emaciated—in fact, reduced to a *mere skeleton*—and had the appearance of one suffering from some malignant disease. She, however, suffered little or no pain, with the exception of occasional vesical tenesmus, which latter symptom was only elicited by the closest questioning, and which she thought very trivial. At this time she had not noticed any blood in the urine.

She had been under the care of two able physicians, one telling her that she need not expect to recover; the other saying she had a miscarriage, and would require a *curretting of the womb* to insure relief from the hæmorrhages. On examination I found the uterus in a normal condition in every respect, with the exception of a slight laceration of the cervix. There was no evidence that a miscarriage had taken place, or that the hæmorrhages had their origin in the uterus. The ovaries and tubes were in a healthy condition. I, therefore, excluded the uterus as the origin of the profuse hæmorrhages, which had now continued for several months. The urethra at its external orifice presented a laceration a quarter of an inch in extent; and by passing the index finger along on the anterior wall of the vagina, there was

detected a mass the size of a large English walnut; it was somewhat flattened, and to the finger in the vagina was quite firm. It appeared to be on the interior surface of the bladder, extending from the fundus to the neck of the bladder.

Introducing carefully a metallic catheter and drawing off a small quantity of urine—free from blood—the growth could be easily felt with the instrument, in the location already indicated. The growth here—in the bladder—felt softer, with somewhat ragged edges, was not pedunculated but *on the contrary, appeared to have a broad attachment to the posterior vesical wall.*

I asked my assistant to feel the growth with the instrument, already in the bladder, and to use extreme gentleness in its manipulation, as these growths frequently bleed profusely. He, however, made undue pressure on the growth, when, suddenly, a profuse hæmorrhage occurred; the patient must have lost at least three pints of blood, some fragments were also passed.

She was put to bed, with the hips elevated, and measures were taken to counteract the shock. These consisted in the application of ice over the hypogastrium, and in the vagina; and hot water bottles to the extremities, and the administering of a small quantity of whiskey. The hæmorrhage ceased, and but a short time ensued till reaction occurred. For a number of weeks large quantities of milk, with other nutritious diet were given; chalybeates and vegetable tonics employed, and absolute rest in the recumbent position enforced.

A microscopic examination of the fragments passed from the urethra, proved the growth to be *Fibro-Papilloma of the Bladder.* I therefore decided to make no operative interference for the present, preferring *la médecine expectante*, as there seemed a decided tendency for nature to expel the growth.

On November 24th, another hæmorrhage occurred; more fragments were passed. The urine was found to contain blood occasionally; at other times, perfectly free from blood.

These fragments continued to come from the bladder every few days, for a period of about four weeks. No severe bleeding occurred after November 24th, and the patient continued to improve. The examinations which were made from time to time proved the growth to be gradually diminishing in size until she was discharged, January 30th, 1890, much improved. On that date the only traces of the vesical growth was a slight thickening of the posterior vesical wall.

She menstruated naturally the latter end of December; again in January, and continued regular. I saw her in December '90, when she informed me she had been in perfect health since leaving the Hospital. Had not had any hæmorrhages of any kind; had continued to menstruate regularly up till October. On examination I found her about three months pregnant and *no traces of the vesical growth.*

I report the foregoing case, firstly, because there are not any reported cases, to my knowledge, where these vesical growths of the bladder, have been expelled by nature through the urethra, and thus resulting in a cure, without the intervention of an operation; secondly, because until recently there has been but little said or written on the subject, and have been considered extremely rare, while there is but little doubt they are frequently overlooked, especially in the female.

THE MECHANICAL TREATMENT OF UMBILICAL HERNIA IN CHILDREN.[1]

BY J. M. THOMAS CHAPMAN,
BESSEMER, ALA.

These varieties of hernia of late have caused considerable discussion from the medical profession. More able men than myself have handled the subject.

The treatment as recommended has not met with general approvement. To me it seems a little presumptuous that I should advance any new treatment but following the old adage, "In unity there is strength," by combining our ideas as we are working and tending in the same direction, by co-laboring together we may yet reach the goal for which we are striving.

In some of these cases the hernia yields readily to mechanical appliances, it matters not of what kind, so there is pressure enough to keep the intestines within the abdominal cavity. Other cases are more obstinate, and give physicians considerable annoyance.

The treatment recommended by our most able men is not satisfactory.

The cork pad of Erichsen is very seriously objected to for this reason, the pressure is not equal, the resisting force is so great as to cause the aperture through which the hernia has escaped to assume less circular

[1] Read before the Amer. Med. Assoc. May 6, 1891.

outline, and the aperture to enlarge, as its natural tendency is to be displaced.

The treatment of Ashurst being very similar, I will not dwell on it as a whole, his treatment but call special attention to certain points, viz.: He used wax instead of cork, it is to be stripped on with adhesive plaster, and removed from time to time when detached by washing. In children where the cuticle is so delicate plaster of any kind that remains on for any time, abrases the surface and causes the child to cry and fret to such an extent that this treatment is unsatisfactory. A child aged nine months was brought to me for treatment, founded with unbilical hernia. From inquiry I found that the hernia made its appearance in the child when two months old. I tried the various modes of treatment as recommended.

My case did not seem to improve, but, to the contrary, get worse. The family of which the child was a member was very much discouraged, they were unwilling for any operation.

I tried a number of appliances that I constructed with negative results, but one idea leading on to another with the same end in view resulted in making the following, to wit:—

I made a jacket, about 6 inches wide, of silk fabric, nicely padded with sixteen eyelet holds on either side. I used absorbent cotton for padding, as it takes up all the impurities that may arise from the cuticle. It is a disinfectant, and makes the jacket soft and light. I attached anteriorly, and posteriorly over both right and left shoulders, strips two inches wide; these strips are padded the same as jacket, their use is to hold the jacket in place, as its natural tendency is downward. I used a round silk elastic for lacing the jacket, this cord will give easily and is stout enough to adjust itself.

If the flatus in the bowels is excessively abnormal I give a simple laxative which will generally relieve them. I take the pad from the water truss, remove the metallic plate from the silk gauze over the exposed surface by means of silk threads, I then adjust the pad to the hernia and attach the pad to the jacket while in position.

The beauty of this pad is its lightness, and softness, and yet it is sufficiently stout to hold parts in place, without enlarging the aperture.

It does not abrase, and can be worn without any discomfort to the child. When the child is asleep, I recommend that it be removed, and replaced on awakening.

I have used this truss in about fifteen cases, the results have been satisfactory.

I have recommended the use to a number of my brother physicians, and in every case the results were gratifying. I had one made under my own supervision, for my esteemed and honored friend, Dr. W. E. B. Davis, of Birmingham, Ala. He was so much pleased with it that he requested me to prepare a paper on the subject, which I have done. This is only a synopsis, so not wishing to consume too much of your valuable time, I will sum up the advantages of this simple little appliance.

1. I claim that it is light, and yet stout enough to hold parts in place without discomfort to the child.

2. The water pad is such that it will not produce force enough to enlarge the aperture, as we know its natural tendency is to be displaced.

3. It will not abrase, and can be worn, if the bowels should be enlarged, from accumulation flatus, as the silk cord will give to such an extent as to adjust itself to the surroundings.

4. And last, but not least, if it does not obliterate the hernia, it facilitates subsequent retention.

Society Reports.

STATE MEDICAL SOCIETY OF PENNSYLVANIA—FORTY-FIRST ANNUAL MEETING,

READING, PENNSYLVANIA, JUNE 2, 3, 4, AND 5, 1891.

First Day—Morning Session.

The meeting was called to order by the President, Dr. Alexander Craig, of Columbia, Pa., and prayer offered by the Rt. Rev. M. A. DeWolfe Howe, D. D., LL. D., Bishop of the Diocese of Central Pennsylvania. Hon. T. P. Merritt, Mayor of Reading, being introduced by the President, delivered an address of welcome on behalf of the city of Reading.

ADDRESS OF WELCOME.

The Mayor said it had been forty years since the State Medical Society of Pennsylvania, then in its infancy, had met in Reading. Since then the progress of the medical

sciences had been very great, and deserved the warm appreciation and earnest support of the community at large. In his opinion the medical profession was above all others the most self-sacrificing. In the life of a true physician, all thoughts of personal convenience were laid aside. This was especially true of the country doctor.

Many of the members present, continued the Mayor, had not only gained name and fame in their professional careers, but had also won well-earned laurels by active service during our late war. He hoped that the stay of the visiting physicians in Reading would be a pleasant one, and that they would carry pleasing memories away with them. They would be taken over the mountain railways and be shown landscape pictures of nature's own production, that rival any in America, and that when once seen can never be forgotten.

In addressing this assembly of physicians the names of many came to his mind; among the dead being Pancoast, Wood, Gross, Leidy and others, and among the living, Agnew, Pepper, Tyson and Keen.

The Mayor then extended an invitation to the visitors to visit the leading manufactories and industries of Reading, and in closing said: "We are a growing town. We have three Hospitals, one Old Woman's Home, and several other charitable institutions, all well supported. Our schools thrive, our churches are everywhere in the city, and our industries are daily increasing. I sincerely hope that your meeting will be a most profitable one, and trust only that your pleasant relations with us, and the enjoyment you may partake of while here, will be ever linked in your memories among the happiest recollections. Again, in the name of the citizens of Reading, I bid you a hearty welcome."

Then followed an address of welcome by Dr. S. L. Kurtz, Chairman of the Committee of Arrangements, on behalf of the Berks County Medical Society.

ADDRESS OF WELCOME.

Dr. Kurtz said: "Forty-two years have elapsed since your last meeting in this city. A generation of people has been born and died in the interval. Of the members of the Berks County Medical Society, who greeted your organization on that occasion not one is with us to-day, and of the members of the State Society in attendance then, there are but five survivors." Dr. Kurtz then spoke most forcibly on the urgent need and desirability of having the Legislature enact a law governing the practice of medicine in Pennsylvania. The speaker then gave a brief but interesting description of Berks County, which, he said, was an eminently agricultural and manufacturing district. The population of Reading at the date of the former meeting was about 12,000, while to-day it exceeds 60,000. In the meantime the city's manufacturing establishments have also greatly multiplied in number, increased in capacity, and are of a most diversified character. Dr. Kurtz then referred to several things in which he claimed Berks county excelled, mentioning among others the Brown-Segment wire gun, and the Carpenter steel projectiles. He then gave a vivid and interesting description of Mounts Penn and Neversink, Klapperthal, the Highland House, Mount Penn Tower and the Mineral Spring Park, points of interest which the visitors would have the opportunity of seeing. In closing he said that the members of the Berks County Society desired that every visiting member and delegate should not only feel that he had garnered the golden fruit of knowledge and experience during his stay in Reading, but also that his social enjoyment might ever remain as a bright and enjoyable remembrance.

It was then announced that the Postal Telegraph Co. had established an office in the hall for the convenience of the visitors.

Dr. Charles W. Bachman then read the programme, and immediately after, Dr. Charles W. Dulles moved that the report of the Committee on Incorporation, of which he was Chairman, be inserted here instead of during the proceedings of the second day, where it had been placed. The motion was carried and Dr. Dulles proceeded to read the report, which stated that a charter had been obtained and that the present meeting was the first the Society had ever held as an incorporated body. Dr. Dulles presented the charter to the President, who delivered it to the custody of Dr. Atkinson, the Permanent Secretary.

On motion of Dr. Jackson, Thursday morning (third day) was set apart for the consideration of amendments to the constitution, during the time allotted to unfinished business.

The report of the Treasurer, Dr. Dunmire, was then presented, and the assets of the Society shown to be $809.88. During the year $2,709.00 had been received from the various county societies, and $2,097.64 expended.

Dr. Edward Jackson then presented the

report of the Committee on Publication, regarding the publishing and distribution of the Society's transactions. The report was received, and the bills incurred ordered to be paid.

It was moved by Dr. Dulles that the Permanent Secretary be authorized to hold the treasurer's bond for $1,000. Heretofore while the bond has been required, no custodian for the same had been appointed. The motion was carried.

The President then appointed an auditing committee to audit the treasurer's account.

Dr. Murray Weidman, of Reading, offered a resolution providing for the appointment of a committee to consist of one member from each county to collect funds for the erection of a monument in Washington, D. C., in memory of the late Dr. Benjamin Rush, of Philadelphia. The resolution was adopted, and each county asked to nominate one of their members to serve on this committee. Dr. Weidman then presented to the Society a copy of the proceedings of the meeting at which the Society was organized, Oct. 11, 1848. In accepting this gift, the Permanent Secretary stated that these proceedings were extremely rare and that the gift perfected the archives of the Society, none of the proceedings being missing. A vote of thanks was tendered to Dr. Weidman, and the session then adjourned for the morning.

The Afternoon Session—2 P. M.

The afternoon session was opened by Dr. J. Chris. Lange, of Allegheny, who delivered the annual

ADDRESS ON MEDICINE.

This address showed careful preparation and was well received. Dr. Lange stated that a golden era was being entered upon by the Medical Profession, and that great things were promised in the near future. He spoke of the growing inclination of the profession to use proprietary medicines, and vehemently denounced this tendency. He declared that the introduction of such remedies was merely a scheme to make money for their owners, and that their success was a detriment to the profession. There are many reliable and effective medicines being used which are standard, yet many reputable physicians desert these well-tried therapeutic agencies for proprietary medicines which have emanated from the laboratory of the chemist instead of from the clinical experience of the physician. From a medical and ethical standpoint, such conduct is inexcusable.

There being no discussion, Dr. A. B. Brumbaugh, of Huntingdon, delivered the annual

ADDRESS ON HYGIENE.

During the course of his address, Dr. Brumbaugh said that less attention was being paid to ventilation than was proper, and that the most important questions a physician was called upon to answer were embraced in hygiene. Dr. Brumbaugh also advanced the assertion that no case of consumption exists that has not been brought on by dyspepsia, and that many cases are directly traceable to the use of tobacco, which may justly be looked upon as an exciting agent of this disease. Could tobacco, together with its ally, the liquor traffic, be rooted out, one of the most infectious diseases would be greatly mitigated. The licensing of tobacco and liquor, and securing revenue from these sources, is like sending out an army of fiends to mutilate and destroy, and then sending out another to bind up the wounds of the sufferers. Dr. Brumbaugh also spoke at length on the danger of water pollution by cemeteries near the banks of streams in large cities, and spoke of this as a potent factor of disease.

Dr. Wm. F. Waugh was then called upon for his paper on typhoid fever, but failing to respond, Dr. John M. Batton, of Pittsburg, read a paper on the subject of

TAPE WORM.

Dr. Batton cited several interesting cases in which he had been able to remove entire worms, measuring from 2 to 7 yards in length, by the use of turpentine and cocoanut.

Dr. James Tyson, of Philadelphia, in the discussion that followed the reading of this paper, said that cases of tape worm were very rare, and that he only met about one case a year in his practice. The subject was fully discussed by several members.

Dr. John B. Roberts, of Philadelphia, presented a resolution to the effect that the bond of the treasurer be placed in the hands of some reputable Trust Company, to guarantee the faithful performance of his (the treasurer's) duty, and that the annual premium be paid by the Society. The resolution was laid on the table.

An invitation from the Wyomissing Club, tendering the visitors the use of the club-house during their stay, was, on motion of Dr. Ulrich, accepted, and a vote of thanks tendered the club. The session adjourned for the day at 4 P. M.

Later in the afternoon a visit was made

to the Reading Hospital, where the visitors were received and entertained by the Ladies' Auxiliary, and lunch served. The location and excellent equipment of the Hospital afforded the visitors much gratification.

In the evening, at 8 o'clock, the members again assembled in the Academy of Music, where the entire meeting was held, in order to hear the

PRESIDENT'S ADDRESS.

The Academy not only contained members of the Society but also a large number of ladies and guests, so that the large auditorium was well filled. Dr. Craig, the President, was introduced by Dr. S. L. Kurtz, chairman of the committee of arrangements.

At 9 P. M. a reception and banquet was tendered the visiting physicians by the members of the Berks County Medcal Society of

Second Day—Morning Session.

The meeting having been called to order by the President, the following physicians were named for the Committee on Nominations: Allegheny, A. Koenig; Armstrong, J. F. Henry; Berks, H. Landis; Bradford, C. L. Stephens; Bucks, J. N. Richards; Butler, J. C. Cort; Chester, W. R. Perdue; Dauphin, W. T. Bishop; Delaware, W. B. Ulrich; Elk, J. J. Finerty; Green, J. M. Williams; Huntingdon, A. B. Brumbaugh; Indiana, A. B. Ansley; Lackawanna, L. M. Gates; Lancaster, M. G. Motter; Lebanon, J. R. Bucher; Lehigh, M. F. Early; Luzerne, L. H. Tabor; Lycoming, J. G. McCormick; Montour, C. B. Mayberry; Northampton, W. L. Estes; Philadelphia, Bernard R. Lee; Schuylkill, J. F. Bronson; Warren, M. S. Guth; Washington, J. B. Donaldson, and York, S. J. Rouse.

Dr. Ziegler, of Columbia, opened the business by moving a vote of thanks to the President for his able address. The motion was unanimously carried. The first paper of the day was the

ADDRESS ON MENTAL DISORDERS.

Read by Dr. Samuel Ayres, of Pittsburg. Dr. Ayres dwelt principally upon gastro-intestinal catarrh as a cause of insanity. He said that melancholia and disorders of a similar nature were in the majority of instances attributable to a derangement of the digestive organs, or the stoppage of the passage of some duct. A healthy, vigorous body, he regarded as essential to a sound mind. Many other derangements of the nervous system were also due to intestinal troubles. In his opinion many of the mental disorders found in adults begin in childhood, and are due to injudicious feeding. Hot bread, cakes, sweets, and so forth, were the cause of many digestive derangements which result in serious disorders as age increases.

The liver normally acts as an obstruction to, and destroyer of, the poison which enters the system, but when this organ becomes weakened by vicious living, it is no longer able to discharge its duties, and cannot throw off all the poison. There are three recognized forms of gastro-intestinal poisoning. The first by sulphurretted hydrogen, formed by putrifying matter within the stomach and bowels. This condition may justly be called a gastro-intestinal sewage poisoning. The second form is by ptomaines, and the third is a toxæmia. Al these may result in both mental and nervous derangements. In passing cases where the exciting disease is neither aggravated nor chronic, these symptoms may take the form of vertigo or insomnia, and are directly due to the absorption through the digestive tract of some morbid element. If these symptoms become intensified by chronic gastro-intestinal troubles, melancholia or even suicidal mania may be the result. The absorption of toxic matter may frequently occur through the kidneys, and we often find forms of insanity supplementing renal disease—especially Bright's disease. In such cases the uræmic disease is not the primary cause of the mental condition, but it causes a discharge of poison into the blood, and this in its turn, gives rise to the mental symptoms. Science has, unfortunately, not yet advanced sufficiently to enable us to ascribe any one definite cause for insanity, neither has it yet shown us that it is the work of a microbe. The speaker believed, however, that some specific would be found for insanity, and that at no distant day some lymph would be found, the inoculation of which would effectually counteract the poison that diseases the mind.

At present prophylaxis promises more than therapeusis, and the preventive or active treatment of dyspepsia in children is of great importance in this respect. Even cases of melancholia and other forms of insanity have yielded when, by means of active medication, the digestive disturbances have been cured. In such cases all food or drink which is likely to cause rapid fermentation should be avoided. Diuretic elimination is also frequently of great value.

Finally, in children of weak digestion all starchy or saccharine foods should be carefully restricted.

Dr. Israel Cleaver, of Reading, then read a paper entitled:

HISTORY OF THE MEDICAL PROFESSION IN BERKS COUNTY.

The reading of this paper was followed by Dr. H. G. McCormick's

REPORT OF THE LEGISLATIVE COMMITTEE.

This report related to the bill for the appointment of Board of Medical Examiners, which was defeated by the last Legislature. The report showed that the bill was defeated by the members of the Society themselves, and detailed the energetic efforts of the committee to secure legislative protection for the medical profession.

Dr. E. E. Montgomery moved a vote of thanks to the Legislative Committee. The motion was carried.

Some discussion ensued upon the suggestion that the committee should be continued so as to make another effort to secure legislation at the next session. Action was deferred until the time allotted for new business was reached.

Dr. J. M. Anders, of Philadelphia, read a paper entitled:

THE TREATMENT OF SUBACUTE PLEURITIS.

Dr. Anders related the histories of many cases successfully treated by himself, and also spoke of the various methods employed in the treatment of this disease. He strongly advises light gymnastics for the development of the chest. The paper was discussed at some length by Drs. J. B. Roberts and James Tyson, of Philadelphia, and Dr. Carpenter.

Dr. Wm. F. Waugh then read his paper on

TYPHOID FEVER,

This being the third paper on the subject which Dr. Waugh has read before the Society. It embraced a large number of cases successfully treated.

Under the head of New Business, Dr. W. B. Ulrich, of Delaware, presented a resolution authorizing the appointment of a committee of seven, to continue the effort to have the Legislature pass a bill for the appointment of a board of Medical Examiners, and appropriating $200 for the expenses of the said committee during the year.

The resolution was adopted.

Drs. Early, Richards and Cleaver, who had been appointed to audit the report of the Treasurer, found it correct.

Dr. Hiram Corson, of Conshohocken, then presented the following preamble and resolution:

"In view of the fact that insanity seems to be on the increase in a ratio greater than the ratio of increase of population, and that just about one-half of the thousands of insane in our hospitals are females, it appears to me that it is desirable to have both sexes represented in our Board of Public Charities, and also in our Boards of Trustees of Hospitals for the care and treatment of our insane. And in the presence of the fact that the zealous, unaided efforts of a single woman—the well-known and greatly beloved Dorothea Dix—has had more effect in improving the condition of the insane in our State, and indeed in the whole country, than can be claimed of any one of us, therefore,

"*Resolved*, That a committee be appointed by the President of this Society, to appeal to His Excellency, the Governor, to fill the first vacancy which shall occur in the Board of Public Charities by the appointment of an enlightened and philanthropic woman."

The presentation of Dr. Corson's resolution and preamble, provoked some discussion.

Dr. Ulrich, of Delaware, heartily endorsed its language and paid a high tribute to women.

Dr. Bishop, of Harrisburg, suggested that the Society approach the subject with some care. He was in favor of the resolution, but the preamble, if adopted, would mean an endorsement of its language, which, however, he was not prepared to accept because he did not believe the ratio claimed was justified by facts. It was explained that the preamble was simply intended to represent Dr. Corson's personal views on the subject, and the resolution was then adopted, minus the preamble.

Afternoon Session—2 *P. M.*

The first order of business was the

REPORT OF THE COMMITTEE ON NOMINATIONS.

The Committee reported that they had unanimously elected Dr. S. L. Kurtz, of Reading, to the position of President. The announcement was warmly greeted. The remainder of the officers were elected as follows:

First Vice President, Dr. John B. Roberts, of Philadelphia; Second Vice President, Dr. H. H. Whitcomb, Norristown; Third Vice President, Dr. I. C. Gable, York; Secretary, Dr. Wm. B. Atkinson, Philadelphia; Assistant Secretary, Dr. Charles W. Dulles, Philadelphia; Treasurer, Dr. George B. Dumire, Philadelphia.

Delegates to the American Medical Association, Drs. A. M. Miller, Lancaster; H. O. Whitman, Dauphin; J. C. Biddle, Schuylkill; O. J. Stephens, Bradford; E. E. Montgomery, Philadelphia; T. M. Livingstone, Columbia; M. A. Rhoads and Henry Landis, Reading; A. B. Brumbaugh, Huntingdon; W. B. Ulrich, Delaware; W. F. Stewart, Wilkesbarre; J. J. Finnerty, Erie; H. D. Gardner, Lackawanna; J. M. Baldy, Philadelphia; R. G. McCormick, Williamsport; J. N. Richards, Bucks; Jacob Price, West Chester; A. A. Woods, Erie; J. C. Cort, Butler; Dr. Nutt, Williamsport; Hiram Corson, Montgomery; W. Murray Weidman, Berks; A. F. Bronson, Schuylkill.

Delegates to State Societies: Drs. J. W. Richards and W. L. Esters, to New Jersey; Dr. Taylor, of Wilkesbarre, to New York; Drs. M. G. Motter and T. C. Detweiler, to Maryland; Dr. M. L. Herr, of Lancaster, to the International Conference at Rome.

Dr. Thomas J. Mays then read the paper entitled:

THE CONTAGION THEORY AND TREATMENT OF CONSUMPTION.

(See Reporter, June 6, 1891.)

This was followed by a paper read by Dr. Hugh Hamilton, of Harrisburg, entitled:

THE PHYSIOLOGICAL BEHAVIOR OF KOCH'S REMEDY.

Then followed a discussion of the subject of consumption which was to have been opened by Dr. Traill Green, of Easton. This gentleman, however, being absent, the discussion was opened by Dr. Charles W Dulles, of Philadelphia.

Dr. Dulles said that it was over 200 years since Sir Thomas Brown, in his admirable work, which every physician can peruse with advantage, spoke of the curability of consumption, and in a letter to a friend cited a severe case which had entirely recovered. Dr. Dulles went on by briefly touching upon the works and experiences of various medical writers from the science's very earliest history, all showing that even at those times the possibility of the cure for consumption was recognized. To be sure, the death rate from consumption is still enormous, about 60,000 deaths occurring yearly from this disease in British countries alone. The idea that consumption is incurable is very deeply rooted in the minds of the public. This belief is not new, yet consumption has been cured even during the time of Hypocrates, who refused to regard the disease as necessarily fatal. All through the history of medicine we find cases reported in which this dread disease has been cured. Hildanus tells of a most severe case, resulting in recovery.

Christian Bennett, who was born in 1617, was himself affected, and his work in which he describes his own cure, is well worth reading. This writer said that it was well to continue the curative means for some time after an apparent cure. The late Dr. George B. Wood claimed that consumption was often cured, or at least ended in complete recovery, while the cases of Dr. Joseph Parrish, and Bowditch, are familiar to all the profession. Dr. Dulles said he doubted not but that many of his hearers could report cases illustrating the curability of consumption from their practices. He said that he had at present several patients who were entirely free from cough and walking about well, who had unmistakably come to him as consumptives. The speaker then proceeded to cite several illustrative cases.

Dr. Dulles laid great stress upon the importance of properly conducted institutions for the treatment of the disease. While many patients may be well treated at home, they would surely do better in a properly conducted hospital where every facility for proper treatment would be at hand. He also called the Society's attention to the fact that such a hospital had been recently established in Philadelphia, called the Rush Hospital, and he hoped that this hospital would prove to be a more lasting and suitable memorial to the late Dr. Benjamin Rush, than monuments in bronze or marble.

Dr. W. T. Bishop continued the discussion by saying that while he had great admiration and profound respect for investigators, yet in his own mind he classed them with pharmacists. Both, in a large measure, do their work in the laboratory. After all, the treatment of consumption must be a rational treatment, in spite of surroundings and and whether the disease be produced by a bacillus or not. Study and experience will surely show us still more, and in destroying one scientific idol we may find a new point

of value in the treatment of the disease. At present he believed that too much was claimed for new remedies, and also that too much was claimed for the disease.

Dr. Bishop agreed with Dr. Mays's assertion that consumption was neither infectious nor contagious. The immunity gained by inoculation of man or animal is still disputed, and in Dr. Bishop's mind, has yet to be proved. The finding of a single tubercle bacillus in any one of these cases destroys the entire theory.

Regarding specifics, whether for consumption or any other disease, he does not believe in their existence. The enthusiastic investigator claims far too much, and wastes much time and energy in a search for something which does not exist. They seek to rob the grave of its lawful victim. The physician can at best only direct, it remains for the patient to accomplish the rest, and so long as this is true there will be no specifics. The apparent results of delusive tables would be greatly modified if compared with family histories and surrounding circumstances, and if all these points were clearly elucidated many would change their opinion.

Dr. Lewis H. Taylor said that if he were compelled to believe all he had recently read and heard regarding the contagiousness of consumption his life would be surely very miserable. A few weeks since, he had the pleasure of hearing the reading of a very valuable paper on the subject, in which it was claimed insomuch as molasses candy might be handled by tuberculous subjects it could also become infected, and it was therefore dangerous to give it to children. Again, insomuch as oyster openers might be tuberculous, raw oysters are dangerous; likewise milk, also meat. You are in mortal danger in any public conveyance; in fact it is a real wonder that with all these menaces to human life the human race still exists! Surely in such theories there is much absurdity.

We are, however, longing for light upon this dark subject, and we shall ever strive to find it. If we can dispel from the minds of over fearful subjects, the useless fears of continual menace, as well as the theory of incurability, we shall do well; while on the other hand, equal good can be accomplished by teaching the reckless the possibilities of evil which their rashness is likely to incur.

Suitable institutes and hygienic surroundings are, of course, of inestimable value, but unfortunately are not obtainable for all classes. In such cases what shall we do? We shall do as best we can, of course; we will remedy the unhygienic condition of the surroundings as far as possible, and we will ever seek to inspire our patients with that most important factor pertaining to subsequent recovery, *hope*. Let them know that they are not necessarily doomed to an early death, but that with care an ultimate recovery is very possible.

While rushing ever onwards in our search for knowledge, it is well to also hold fast to what we do know. Were it possible to sift the good, and only the good, from the great mass of treatments, theories, and remedies that have been reported to the profession, a great good might be done, and we might justly hope for great things.

Dr. L. F. Flick then said, in continuing the discussion, that for many years he had taken great interest in the subject of consumption, and had done considerable original work. At this meeting theories had been advanced that he felt called upon to challenge. He claimed that many had very erroneous ideas regarding the primary and fundamental truths concerning consumption. Many think because it is not contagious in the sense that small-pox is contagious, it is therefore not contagious at all. Even the advocators of the contagion theory do not claim this. On the one hand small-pox is a quickly contagious disease; on the other hand consumption is a slowly contagious disease. Again, the contagiousness of tuberculosis is confined within certain limited environments, namely, pus or sputa, and it cannot get about except by pus or sputa. The idea that our lives are in constant danger may be absurd without the fact of the contagiousness of tuberculosis being denied. Consumptives may indeed expectorate sputa laden with bacilli in the street with but very little possibility of any contagion arising therefrom. The bacilli do not live forever, and the sputa may either be washed away or trodden into the earth.

Dr. Flick said that his own clinical experience had taught him that the disease only showed its contagiousness in cases of prolonged contact, such as exist when nursing a patient during the last stages of the disease. As a point illustrating the non-contagiousness of tuberculosis Dr. Mays claimed that the tuberculosis caused in animals by inoculation was not the same as that occurring in man. Clinical evidence, however, is of greater value than experimental, and it has been clinically proved beyond all doubt that tuberculosis is contagious. He then cited a series of cases coming under his own obser-

vation in which the inmates of certain houses in a given locality, were one after another attacked with the disease. In the houses observed the deaths from consumption all occurred in 20 per cent, while in 80 per cent of these houses the disease did not occur. Scrapings from the walls of such infected houses have been innoculated into animals and have caused tuberculosis. It has repeatedly been proved that prisoners placed in cells previously inhabited by consumptives, will themselves develop the disease. The disease when once introduced into a locality becomes endemic.

It is a well-known fact that certain Indian tribes which have been infected with the disease have been completely exterminated by its ravages, while other tribes in which the disease has not been introduced remain entirely free from it.

Regarding the value of the prophylactic measures that have been recently introduced in Europe for the prevention of tuberculosis, in Italy alone, where the disease has been indeed a scourge, the death rate from consumption has been reduced seventy-five per cent. since the rigid enforcement of these measures, and at present in the southern part of Italy, when at one time not long since, consumption raged the worst, the death rate from this disease is now as low as $\frac{1}{10}$ per cent., or practically nil.

"Regarding specifics, I not only believe in them, but use them with the best possible results. My own treatment consists of inunctions of a solution of iodoform in olive oil, together with larger doses of the drug internally. By this treatment I have cured a large number of cases. The gain in weight has been from six to twenty pounds, and the cough and other symptoms have disappeared. Of course I do not pretend to claim any infallibility for this treatment. The case may be too far advanced or so complicated as not to be more than benefited by this treatment."

That the treatment is of great value you will acknowledge when I tell you that my present results are from 50 per cent to 75 per cent better than they were prior to my using this method of treatment.

Dr. Ulrich, of Delaware, after telling an amusing anecdote regarding the infectiousness or contagiousness of disease, said, that after forty-five years' experience with consumption in his practice he could come to no other conclusion but that the disease was contagious. He had noticed this particularly in married couples, where the husband had consumption the wife was almost sure to develop the disease, and, indeed, frequently succumbed before the husband. The reverse was, however, seldom the case. What the means of propagation were he did not know, but that it was propagated could not be denied. Dr. Ulrich regarded poverty as a great source of consumption, due possibly to the bad hygienic surroundings of our poorer quarters.

Dr. Mays, in closing the discussion, expressed his pleasure in seeing such a general interest manifested in this important subject of pulmonary consumption; but would have to take exception to Dr. Flick's statement that while this disease was contagious it was not so in the same sense as are small-pox or measles. If it is contagious then it becomes a question of exposure, whether there may be a difference in the length of the incubation period or not. In the case of small-pox and measles those who are most exposed to the contagion are more liable than those who are not, but if it is true, as the speaker has shown, that those who are exposed to the bacilli are not more liable than those who are not, the plea of contagion, so far as consumption is concerned, must fall to the ground.

Dr. Flick's home infection theory rests on equally false premises. It shows a coincidence, and nothing else. Dr. Formad said, in discussing Dr. Flick's paper, some time ago, before the Philadelphia County Medical Society, "Who knows that affections which are universally regarded as being non-contagious do not show a similar relationship?" Probably if Dr. Flick had investigated the localities in which the abortions and miscarriages of the fifth ward occurred, he might have found that these were confined to certain houses. Dr. F. P. Henry, in discussing the same paper, said: "Sailors are very subject to syphilis, and they live chiefly at sea, therefore, from Dr Flick's premises, we would be justified in concluding that the syphilitic poison was lurking in the fabrics of ships, and not on land where the disease is contracted.

In regard to the statistics of Naples, which Dr. Flick says show such a marked diminution in the death rate of consumption, in consequence of the rigorous measures of isolation which were enforced in that kingdom from 1782 to 1860, he would say that he has known a number of authorities who have thought and written on this subject, but none who take such a distorted view of it as is done by Dr. Flick. By what means does he arrive at this conclusion?

By quoting the statistics of 1887, which

show that Naples had a low death rate from consumption during that year. But does he know that the death rate was the same in 1860, when these measures went out of force, as it was in 1887? If he had referred to the speaker's paper on the subject, he would have found that Dr. de Renzi, whom Dr. Flick quotes so frequently, "Marvels greatly (in 1863) that the City of Naples is fully as much liable to consumption, as either London or Paris, though the salutary condition of the climate should render it far less common," and that Drs. Spatuzzi and Somma, who have paid great attention to the mortuary returns in Naples, about 1860, affirm that one-sixth or one-seventh of the whole mortality was due to consumption; a mortality which compares very unfavorably with countries where isolation of these poor victims had never been dreamed of.

After the conclusion of Dr. May's remarks the session adjourned for the day. Later in the afternoon the visitors were taken over the gravity railroad to the summit of Mount Penn, where some time was spent in the tower, 1200 feet above the sea. The time was well chosen, the air cool, and the sky clear, so that the magnificent view, embracing six counties, and the Schuylkill Valley, was unobstructed.

In the evening the visiting physicians were entertained at a reception, given by the Mayor of Reading, and at another given by Ex-Congressman Hon. Daniel Ermentrout, at his residence.

During the afternoon the exhibitors presented Dr. Howard Reeser with a complete case of obstetrical and emergency instruments, as a token of their appreciation of his disinterested labors on their behalf. The pharmaceutical firms contributed to this gift with a large collection of valuable drugs.

Third Day—Morning Session.

The third day's proceedings opened with the annual

ADDRESS ON SURGERY,

By Dr. O. H. Allis, of Philadelphia. Dr. Allis gave his paper the title of *Problem's in Surgery*, and discussed at length the subject of amputations. He is not in favor of amputation unless it become absolutely necessary. No man is so poor that he cannot be made poorer, and physicians should not be in haste to take a limb from a man. In these days of antiseptic surgery, a crushed limb can be treated in such a manner, that even if amputation becomes necessary, it can, at least, be deferred for a few days, until the patient has recovered from the shock of the accident. The speaker illustrated with the aid of charts the methods of amputating the foot. If an amputation had to be performed, it should be the chief aim of the surgeon to give his patient a good stump.

Fractures and abscesses were then referred to and suggestions made as to their proper treatment by the speaker.

The discussion of this paper was opened by Dr. Packard, of Philadelphia, who said that he favored prompt amputation when any is necessary, but allowing as much of the limb to remain as possible.

Dr. Mordicai Price, of Philadelphia, who suffered an amputation of the right leg in 1863, said that he could carry as heavy a rifle, and do as much climbing as any hunter in West Virginia. He could not understand why in some amputations an unsightly stump was allowed to remain, and that he would consider the surgeon who left more than five inches of stump below the knee, one worthy of prosecution.

The discussion was continued by Drs. Flick, Brumbaugh, Bishop, and the President, Dr. Craig.

Dr. E. E. Montgomery then read a paper entitled:

CONDITIONS REQUIRING ABDOMINAL SECTION IN PARTURITION.

In this paper Dr. Montgomery gave a brief outline of the cases operated upon by him in the Philadelphia Hospital, drawing special attention to the various indications for abdominal section in parturition.

In the discussion which followed, Dr. Duffy, of Pittsburg, endorsed Dr. Montgomery's views. The discussion was continued by Drs. Price and DaCosta, of Philadelphia.

The two following papers on the programme, "Insanity following Operations in General Surgery," by Dr. Joseph Leidy, Jr., of Philadelphia, and "Hare Lip," by Dr. DeForrest Willard, of Philadelphia, were omitted, owing to the absence of these gentlemen.

The next paper read, was one by Dr. Edward Jackson, of Philadelphia, entitled:

WHAT TO DO FOR INSIPIENT CATARACT.

Dr. Jackson, while giving various means by which relief could be approved, spoke of the bad effects the blacksmith, puddling and glass-blowing trades have upon the eyes, and the great relief afforded by dark

glasses to persons whose eyes are exposed to great heat and brilliant light.

The paper was discussed by Drs. Thomas, Barr, and Taylor. The

ADDRESS ON OPHTHALMOLOGY

was then delivered by Dr. J. A. Lippincott, of Pittsburg. The speaker dwelt principally on the subject of trachoma, which he said, prevailed to a great extent in orphan asylums, public institutions, and among imigrants.

A number of proposed amendments to the constitution and by-laws were then proposed, after which the session adjourned.

Afternoon Session.

Dr. Milton Duff. of Pittsburg, opened the session by the annual

ADDRESS ON OBSTETRICS

which embraced an interesting history of, and the present standing of, our knowledge of this subject. He was followed by Dr. S. Solis-Cohen, of Philadelphia, who read a paper entitled:

NEWSPAPERS AND PATENT MEDICINES.

He said: "The subject is a delicate one, and when agitated the parties who advance any opinion against the pernicious evil, are accused of having a personal interest in some similar scheme, or that they desire to choke off all competition.

"There exists in every community a palpable and glaring evil, which reaches high and low, rich and poor. We desire to ask the publishers of the newspapers whether they are willing, in the sight of God, to continue to lend their aid to this fearful evil, the advertising of patent medicines. The miserable newspaper that goes to the poor, and the higher class of reviews and magazines which cater to the rich, both contain column after column of advertisements, testimonials, and certificates which are fraudulent and lying upon their faces.

"No man, be he editor or journalist, believes that a clothing store that only possesses one suit of clothes can perfectly fit anyone. Any physican who advances one effort to produce an abortion, is ignorant of the first principle of his art. In the newspapers we find column after column of advertisements promising to cure diseases of the blood, skin, and lungs if the patient will only swallow these money-making remedies. Men who put forth these advertisements, use the newspapers as a net to catch the poor, deluded creatures who eagerly endeavor to cure themselves by placing faith in these advertisements, written in the blood of thousands who have already become their victims.

"Have newspaper publishers a legal right to publish such advertisements? The answer unfortunately must be, that there is no Legislature to prevent it. But we all deny their moral right. They say that they do not guarantee the nostrums which they advertise. But the editor does guarantee, and is personally responsible for all editorials, and therefore he carefully considers and balances all which goes into the columns of his paper. Why not consider the health and happiness of the people to whom he caters? They say that one is not compelled to buy them, but this is only a secondary consideration, and the use of these quack nostrums is, in a large measure, due to the promiscuous advertising received from the newspapers. Our postal authorities forbid all newspapers, containing the announcement of any lottery, the privilege of the mails, yet, where is there a lottery half go bad as these vile mixtures which bear the name of patent medicines? These mixtures cause patients to lose valuable time in their desire to procure health, and often result in causing death. Many a child has been soothed to death by the use of soothing syrup; many a drunkard has been driven to death by the use of so-called substitutes for whiskey, and many a morphine eater has been killed by the use of substitutes more dangerous than morphine itself. We all have among us, either as patients or friends, editors and newspaper men, and let us go to them, not indignantly, but calmly and in a friendly manner, and put the subject before them. If I were an editor and should insert such an advertisement, I would consider every dollar that I received from such a source as so much "blood money," and as if stamped with the skull and cross bones."

The discussion of this paper was opened by Dr. F. W. Muhlenberg, of Reading, who said that the speaker had omitted to state that religious journals and orators were guilty of the same offence.

Dr. J. L. Zeigler, of Mount Joy, stated that before the discussion went any further he wished to say that it was a case of "Physician Heal Thyself;" and that before the doctors raise a cry against patent medicines they must see that medical colleges turn out better material, and not allow certificates to be given by so-called colleges, which are the worst frauds in the

country. The legislature is perhaps somewhat responsible for this state of affairs, by not acceding to the demand for a Board of Examiners, and thus allowing one of the most glaring frauds which has ever been perpetrated upon the people.

Dr. C. R. Early, of Ridgeway, read a paper on

CATARRH.

The paper dealt chiefly with the therapeusis of catarrh, and many interesting cases were cited.

The last speaker was Dr. John Aulde, of Philadelphia, who read a paper on the

PHARMACOLOGY AND THERAPEUTICS OF ENPHORBIA PILULIFERA.

The speaker claimed many new and interesting properties for the drug, and gave brief histories of a number of cases in which it had been successfully employed.

AMENDMENTS.

Dr. Solis-Cohen, of Philadelphia, moved that the chairman of the Committee on Publication receive the same salary as before, viz., $150, which was adopted.

Dr. Solis-Cohen also offered an amendment to the by-laws and constitution, to the effect that the record of each member include the name of the college where he studied, and the date of graduation. Carried.

The following resolution, offered by Dr. J. A. Lippincott, of Pittsburg, was unanimously adopted:

"*Resolved*, That a committee be appointed on 'Contagious Ophthalmology in Public Institutions,' whose duty shall be to communicate with those who exercise supervision or control over orphan asylums, orphan schools, reform schools, and kindred institutions, with a view of ascertaining what means, if any, are exerted to prevent the introduction and spread of the various forms of contagious eye disease among the inmates. The committee shall also devise such means, as shall in their opinion seem best calculated to lessen the evils which flow from these diseases."

There being no further new business the day's session closed.

Later in the afternoon the visiting physicians paid a visit to St. Joseph's Hospital, where a lunch was served; and at 6 P. M. started on a trip over the Neversink Mountain Railway, stopping at the Highland House and Klapperthal, and enjoying a supper, dance, and music.

FOURTH DAY.

The fourth day's session was merely a formal one and occupied but a few hours. The following list of censors was elected:

1*st District.*—Drs. S. P. Bartleson, Delaware; J. W. Walk, Philadelphia; James Fulton, Chester.

2*nd District.*—Drs. J. B. Walter, Bucks; Traill Green, Northampton; W. B. Erdman, Lehigh.

3*rd District.*—Drs. Hiram Corson, Montgomery; W. Murray Weidman, Berks; A. F. Bronson, Schuylkill.

4*th District.*—Drs. J. M. Deaven, Lancaster; H. O. Orris, Perry; H. L. Orth, Dauphin; A. M. Smith, Snyder.

5*th District.*—Drs. S. P. Ziegler, Cumberland; J. W. C. O'Neil, Adams; D. K. Gotwald, York; J. Montgomery, Franklin.

6*th District.*—Drs. A. B. Brumbaugh, Huntingdon; Crawford Irwin, Blair; John Lowman, Cambria; H. M. Lichte, Somerset.

7*th District.*—Drs. J. O. Robertson, Westmoreland; J. S. Hackney, Fayette; William Anderson, Indiana; J. A. Armstrong, Armstrong.

8*th District.*—Drs. James McCaen, Allegheny; Jesse L. Scott, Washington; W. S. Throckmorton, Greene.

9*th District.*—Drs. S. D. Bell, Butler; E. Griswald, Mercer; D. S. Margins, Beaver; J. A. Richey, Venango; J. Cresswell, Clarion.

10*th District.*—Drs. A. A. Woods, Erie; W. V. Hazeltine, Warren; R. B. Brown, Jefferson; A. M. Straight, McKean.

11*th District.*—Drs. D. A. Hogue, Clearfield; G. T. Harris, Centre; P. H. Detweiler, Lycoming.

12*th District.*—Drs. S. C. Newbaker, Montour; E. R. Meyer, Luzerne; J. H. Vastine, Columbia, L. M. Gates Lackawanna.

13*th District.*—Drs. J. W. Lyman, Bradford; S. Birdsall, Susquehanna.

Then followed the inauguration of the President-elect, Dr. Kurtz. After a vote of thanks being tendered the retiring officers, and the disposal of unfinished business, Dr. Kurtz, the President-elect, adjourned the forty-first annual meeting of the State Medical Society, of Pennsylvania, until the second Tuesday in June, 1892, at Harrisburg.

The State Society has at present a membership of 2,172. At this meeting 300 physicians registered.

The committee of arrangements to whom the success of the meeting was so largely due, included Drs. Samuel L. Kurtz, Chair-

man, James Y. Shearer, C. W. Bachman, H. S. Reeser, M. A. Rhoads, Samuel C. Ermentrout, and A. S. Raudenbush, all of Reading, Pa.

Selected Formulæ.

IRRITABLE BLADDER.

℞

Potassium citrate.....3 iv.
Fluid ext. triticum repens.....
Tinct. of hyoscyamus.....aa . . . .3 j.
Fluid ext. of buchu.....3 ss.
Water, sufficient to make.....3 iij.

M. Sig. One teaspoonful in a wineglassful of water, three or four times daily.

—*Med. Summary.*

TREATMENT OF DYSENTERY.

Minorbi, in *L'Union Medicale*, describes a method of treatment which he has followed in twenty-three cases of dysentery. In one case a cure was obtained in a very few days. The treatment consisted in the insertion into the rectum of suppositories made in the following manner:

℞

Naphthalin.....3 ijss.
Cocoa butter.....3 ijss.

Where there is ulceration or any other condition which tends to make the use of a suppository painful or dangerous, he has recourse to the following injection:

℞

Naphthalin.....grs. lxxv.
Olive oil..... 3 vj.

At the beginning of an attack, when there is a good deal of tenesmus, the injections should be given every half hour, but ordinarily it is sufficient to repeat them three or four times in the twenty-four hours. The advantage of this method is that it does not cause constipation, which opium is apt to produce.

WHOOPING-COUGH.

(Germain Sée in *Jour. de Médecine*):

℞

Powdered belladonna root.....gr. 1-5.
Dover's powder.....gr. ss.
Sublimed sulphur..... gr. iv.
White sugar.....gr. x.

M. Sig: Take in one dose from two to ten times a day, according to age of patient and effect produced.

—*Am. Pract.*

"ONE MINUTE LIGHTNING DROPS."

℞

Ol sinapis.....gtt. v.
Chloroform.....gtt. x.
Spts. terebinth.....gtt. iij.
Spts. vini. rect.....3 ss.

—*Pharmaceutical Era.*

FOR INTERNAL HÆMORRHOIDS.

℞

Chrysarobin.....grs. xv.
Iodoform.....grs. v.
Extract of belladonna.....grs. viij.
Cocoa butter.....3 vj.

Of this are made ten suppositories, and one suppository ought to be inserted into the rectum each day. After five or six hours the pain and the tumor diminish. The treatment may continue for several months without harm.

INTESTINAL FLATUS.

Many young children are irritable, and cry because they have intestinal flatus. Instead of using opiates which are the basis of most of the soothing syrups, Prof. Bartholow gives the following as a valuable remedy:

℞

Misturæ assafœtidæ.....f3j.
Sodii bromid.,.....gr iij-v.

M. This is a dose for a child from one to four months old.

—*College and Clin. Record.*

PURGATIVE PILLS.

℞

Aloes.....15 grains.
Resin of scammony..... 7 "
Resin of jalap..... 7 "
Calomel..... 7 "
Extract of belladonna..... 3 "
Extract of stramonium..... 3 "

Make into twenty-five pills and give one to two a day.

COUGH MIXTURE.

The following is said by the *College and Clinical Record* to be Dr. E. G. Janeway's favorite cough mixture:

℞

Syrup. tolu.....
Syrup. pruni virginian.....
Tinct. Hyoscyami.....
Spirit. ætheris comp.....
Aquæ..... aa.....3j.

M. Sig.—Dose a teaspoonful.

TREATMENT OF GONORRHŒA BY BICARBONATE OF SODA.

According to the *Journal de Médecine de Paris*, Casselan during the past four years has employed a solution of bicarbonate of soda in the strength of 1:100 in the treatment of gonorrhœa. He has treated thirty-three cases and obtained thirty-three cures in from two to three weeks by the employment of injections of the solution named. He bases his treatment on the belief that the virulence of the disease is in direct proportion to the acidity of the secretions.

DIPHTHERIA.

Andeer recommends the application every hour or two, night and day, of the following:

℞ Resorcin.....gr. xlviij.
Glycerine.....f ʒ i.
M.

A spray of a five per cent. solution of the drug should be used in the room and the following administered internally:

℞ Resorcin.....gr. x.
Syrup terebinth..... f ʒ i.
S.—A teaspoonful every three or four hours.

—*Centralblatt f. d. Gesammte Therapie.*

INHALATION FOR WHOOPING-COUGH.

Beall recommends the following formula:

℞ Thymol.....gr. xx.
Acid carbolic, Ol. sassafras, Ol. eucalypti, Reis liq idæ, Ol. terebinthinæ, } .....aa f ʒi j.
Ætheris,.....f ʒ iv.
Alcoholis,..... .....q. s., ad. f ʒ iij. M.

S. Put about thirty drops upon a pad of such size as to be conveniently hung around the child's neck, renewing the application every two or three hours.

—*Daniel's Med. Jour.*

SUBACUTE OR CHRONIC DIARRHŒA.

The following is recommended in the *Southern Med. Record:*

℞ Acaciæ pulv.....ʒ iss.
Creasoti (beechwood).....gtt. xxxii.
Aquæ.....ʒ iv.

Fiat emuls. Sig. A teaspoonful in water (for adults) every 4 to 6 hours.

THE TREATMENT OF TYPHOID FEVER.

Smakovsky, during the space of two and a half years has treated 700 cases of typhoid fever in the following manner:

℞ Calomel.....½ grain.
Sugar.....4 grains.

This to be made into ten powders and one powder given each hour until the evacuation from the bowels becomes copious and soft. The patient is also given a gargle, composed of a solution of chlorate of potash, to prevent mercurial stomatitis. If there are evidences of feebleness of the heart, the calomel is stopped and small doses of the infusion of digitalis are administered. After the calomel has produced its antiseptic and alterative influence the diarrhœa, if it has become excessive, may be controlled by the use of the following powders:

℞ Subnitrate of bismuth..... .....2 grains.
Naphthalin.....½ grain.
Sulphate of quinine.....1 grain.

One of these powders to be given four times a day.

For the cough Smakovsky recommends:

℞ Aqua ammonia.....1 drachm.
Tincture of eucalyptus.....1 ounce.
Essence of peppermint.....10 drops.

Ten drops to be given every two hours.

This prescription is also of advantage in acting as a disinfectant of the mouth. The Russian investigator just named is convinced that the mortality of typhoid fever under such treatment is very much lessened. —*L'Union Médicale.*

SOOTHING SYRUP FOR CHILDREN.

We do not recommend any narcotic soothing syrup, although such are much used; the employment of opiates in these preparations is unsafe, and should be discouraged as far as possible. The following is effectual and perfectly safe:

℞ Treacle.....1 lb.
Distilled water..... .....1½ pints.
Stronger tincture of ginger.....½ fl oz.
Oil of cloves.....20 min.
Oil of sassafras.....30 "
Oil of caraway..... ..... 5 "
Oil of aniseed.....10 "
Rectified spirit..... . 5 fl ozs.

Dissolve the oils in the spirit, then add the treacle with the water, and mix. Dose, from half to one teaspoonful.

—*Era.*

ACUTE URETHRITIS.

Professor J. William White, of the University of Pennsylvania, recommends the following mixture, in capsules. In about two-thirds of his cases the discharge ceased within a week. In the majority it was necessary also to use an injection, and for this he recommends two to ten grains of sulpho-carbolate of zinc in a ten to fifteen per cent. solution of peroxide of hydrogen:

℞ Salol .....3½ grains.
Oleoresin of cubebs.....5 grains.
Balsam of copabia (Para).....10 grains.
Pepsin..... .. 1 grain.

VOMITING OF PREGNANCY.

Cocain with Acetanilid is recommended in the vomiting of pregnancy, also in acute gastralgia, in this proportion:

℞ Cocain. mur..... .....gr. iii.
Acetanilid.....ʒ ss.
Aquæ..... .....ʒ v.

Sig. A teaspoonful hourly.

THE
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Write in ink.

Write on one side of paper only.

Write on foolscap or legalcap paper.

Make as few paragraphs as possible. Punctuate carefully. Do not abbreviate or omit words like "the" and "a," or "an."

Make communications as short as possible.

NEVER ROLL A MANUSCRIPT! Try to get an envelope or wrapper which will fit it.

When it is desired to call our attention to something in a newspaper, mark the passage boldly with a colored pencil, and write on the wrapper "Marked copy." Unless this is done, newspapers are not looked at.

The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

THE TABLE OF CONTENTS.

In response to what we believe is the general wish of our readers, the table of contents is permanently restored to the title page.

LEADING ARTICLE.

The lack of attention given by the pædiatrist as well as the general practitioner to the subject of infantile malaria, is surprising. Both, in meeting intermitting febrile symptoms in very young children and infants, are prone to advance any other diagnosis rather than that of malaria. Recent statistics show that intermittent fevers occur with greater frequency in the early years of life, than at any other period, and that the ages showing the greatest susceptibility to malarial infection are the first and second years.

The chief reason for the failure to recognize intermittent fevers in infants, is owing to their atypical course, which in comparison with the symptomatic picture of intermittent fever in adults, seems an almost totally different disease. It is for this reason that, in all probability, even eminent pædiatrists, failing to recognize the real trouble, have treated the manifestations of infantile malaria as other affections.

In infantile malaria the initial chill is absent, perspiration is seldom observed, and the intermissions between the febrile attacks are usually not clearly defined. In the majority of cases the temperature between the attacks will be ½ to 1½° C. above normal; and in this respect the disease resembles a remittent rather than an intermittent fever.

The infantile organism reacts so strongly to any infectious febrile disease, that it is not long, in cases of malaria, before the digestive and respiratory systems become involved. The child rapidly falls away, the facial color becomes bad, and anæmia is rapidly established. Unless the case occurs in a well-recognized malarial region, the attending physician is almost certain to make a wrong diagnosis. The attending complications will seem to justify a diagnosis of gastric or intestinal catarrh, or even a mild form of typhoid fever, bronchial catarrh

or possibly even phthisis. If the disease occurs during the teething period it is very frequently called "dentition fever." If, in such cases, after having exhausted almost every therapeutic means, the physician tries quinine, he will be greatly surprised at the rapid recovery of his little patient.

Light cases of infantile malaria often recover spontaneously, and for this reason escape notice; indeed, even in the severer forms, a change of air or climate will frequently be productive of excellent results.

In this article, necessary brevity forbids our giving a detailed account of the symptomatology of the various forms of infantile malaria. The subject is one so extensive, and of such interest, as to be a worthy theme for a lengthy monograph. We would, however, state that the greatest stumbling block in the physical diagnosis of these cases has been, the peculiarity and atypical nature of the temperature curves, and the relative condition of spleen and skin. The regular rise of temperature, coupled with restlessness and various nervous symptoms is of great diagnostic value. If such symptoms are present in a child in a district where malaria is known to exist, even although slightly, a diagnosis may safely be advanced. Large doses of quinine—0.5 to 0.8 gramme, *pro die*, according to the age of the child—may be given with impunity, and are productive of excellent results. In such parts of the country in which malaria is unknown, to adults, at least, cases of intermittent fever in children can frequently be shown to be of a malarial nature, apart from their tendency to yield quickly to quinine.

It is not long ago since Laveran and Marchiafava-Celli discovered the *hæmoplasmodium malariæ* to be the germ of malaria. Since then, Dr. Carl Hochsinger, of Vienna, who has made the subject of infantile malaria a special study, has been able to trace this plasmodium in the blood of a number of cases of intermittent fevers in children, when otherwise, from the locality, such a diagnosis would seem unwarrantable. Dr. Hochsinger contributes a most interesting article on the subject in the *Wiener Medizinische Presse*, April 26, 1891, in which he states that during the past year he has found these germs in every one of twenty-four cases of infantile intermittent fever, which have come under his observation. The youngest child in which these germs of malaria were found was only three months old.

In searching for the plasmodium in the blood, Dr. Hochsinger makes use of a solution of methylen-blue and eosin. Taking 100 grammes of a strong, but not concentrated, aqueous solution of methylen-blue, he adds to this a few drops of absolute alcohol, and then ½ gramme of soluble eosin. The mixture is then bottled and sterilized by boiling and will keep for an indefinite length of time. A small quantity of this solution is poured into a shallow dish, and the slides, containing a dry preparation of the blood, are allowed to float in the solution for ten to fifteen minutes, then rinsed off and sealed. Under the microscope the red blood corpuscles will be found stained a deep red, the nuclei of the leucocytes a deep, dark blue, and the hæmatozœæ of malaria a delicate sky-blue.

In every case examined by Hochsinger large quantities of these plasmodia were found, varying in number, form and kind, with the intensity of the disease. In all cases and all stages of the disease, Laveran's so-called *corps segmentés* were observed. These were seen as large groups of closely packed corpuscles of protoplasm of a delicate blue color, and about as large as ⅛ to ⅕ of a red blood corpuscle. In three cases the flagelats form were found, and in one case of severe cachexic malaria, terminating fatally, well defined crescent forms were also visible. The segmented variety were present in every case, and in especially large numbers in the youngest subjects.

Examination of the blood is, therefore, of the highest importance in cases where the possibility of malarial infection in infants and young children is suspected, and also in those cases of intermittent fever in children, of an uncertain origin. The diagnostic value of such an examination is especially great, as

these plasmodia are only found in cases of malarial infection.

With the extreme susceptibility and predisposition of the infantile organism to malarial poisoning on the one hand, and the comparatively easy, and at once positive diagnostic method on the other, the practitioner should not rest content with an uncertain diagnosis in any case of infantile fever of obscure origin, without having first precluded the possibility of a malarial infection by the above simple yet unerring test.

CORRESPONDENCE.

ED. MEDICAL AND SURGICAL REPORTER.

Dear Sir:—I would like to place on record a brief note of two cases, which I have recently done, both of which are cases of abdominal tumors complicating pregnancy. I will in time make full reports of both.

On April 1st, I removed a large intraligamentous ovarion cyst from a lady from Butler Co., Pa., who was pregnant 3½ months. She has gone home, pregnancy not disturbed.

On May 23, I removed from a lady, resident of East Liverpool, O., a fibrocystic tumor, growing from the fundus of the uterus, weighing 22 pounds, with the uterus pregnant 5 months. The child was living, but died. She is in her sixth day, pulse and temperature normal. The first Porro operation in the State, outside of Philadelphia, so far as I know.

Very truly yours,

R. STANSBURY SUTTON.

419 Penn Ave., Pittsburgh.

BOOK REVIEWS.

A GUIDE TO THE CLINICAL EXAMINATION OF THE URINE. By FARRINGTON H. WHIPPLE, A. B. (Harv.) Boston, Damrell and Upham, 1891; pp. 206.

Had there been an urgent demand for any condensation of the already existing works upon urinary examination, possibly Mr. Whipple would have had an excuse for rushing into print with this volume. As it is, however, there is no reason for its existence, even were it a first-rate compilation. Moreover, the book is exceedingly insufficient, both in clearness and accuracy, and in the presentation of the more recent additions to our knowledge of urinary matters.

There can scarcely be a necessity for a systematic consideration of the entire work after such an introduction; and, in fact, sufficient illustrations may be cited from random pages to prove the above assertion. For example, in the consideration of the subject of albumen in the urine, the only tests mentioned are those by heat and acetic acid, and by nitric acid; there are no quantitative tests, not even the popular Esbach's tube. None of the newer albumen reagents are considered: picric acid, the ferrocyanide test, trichloracetic acid, Tanret's or Millard's. In the estimation of sugar the same fault may be cited—there are none of the newer tests, and those as a rule are badly put. For example, the following covers the subject of the fermentation test for sugar (excluding reference to the differential density method): "*Fermentation Test.*—By fermentation, sugar is broken up into alcohol and CO_2; therefore it is only necessary to cause fermentation in the urine, which can be done by the addition of a little yeast-cake. The CO_2 as it forms is passed through baryta water." As a guide for those who need directions, such guidance must be regarded as exceedingly meagre.

In the study of hæmaturia, the urinary symptom is used as an excuse for leading the author into an entirely irrelevant biological study of the blood with a consideration of the differences between the blood of the different animals. The author's test for iodide of potassium in the urine, which substance he recognizes by a brown ring between the layers of nitric acid and urine in the ordinary application of Heller's test for albumen, would be greatly improved, if, after freeing the iodine by any of the stronger mineral acids, some characteristic color reaction were added, as seen, for instance, in the solution of the iodine by chloroform.

The author states that, when H_2S exists in the urine in conditions unassociated with disease of the urinary system it is to be regarded as a favorable symptom. Hydrothionuria is, however, a condition which is rarely recognized in the freshly passed urine, except as a phenomenon of bacterial invasion of the urinary system, or of some connection between the intestinal canal and the urinary apparatus, and in either case is exceedingly unfavorable; beyond this, as a demonstrably free substance in the urine, H_2S practically does not exist.

In the optical appearance of calcic oxalate crystals Mr. Whipple entirely forgets the very characteristic refractive property of these bodies; hence in his separation from similarly shaped crystals of phosphate he must have recourse to chemical tests. On the subject of casts he states that only in a few isolated cases have these been detected in non-albminous urine; in our experience in cases of interstitial nephritis it is quite a common occurrence to meet specimens of urine presenting typical casts, in which with the tests mentioned by Mr. Whipple, absolutely no traces of albumen can be discovered. His simile that a waxy cast "bears somewhat the same relation to a hyaline cast that a fat drop does to an abnormal blood disk" seems exceedingly indefinite and nondescriptive. He states that "pus casts may occur in the course of acute inflammatory conditions. In pyelitis and pyelonephritis the pus corpuscles are frequently agglomerated in masses which are suggestive of casts and may come from the straight tubules. They are usually of considerable size—much larger than the renal casts."

The view announced by Mr. Whipple that active hyperæmia of the kidney is identical with parenchymatous degeneration ("cloudy swelling," large white kidney) may account for his failure to notice pus casts in cases of Bright's disease that are not to be regarded as distinctly acute processes. Both these views are, however, contrary to the truth. Pus casts, casts to which pus corpuscles are intimately attached, in urines showing few free pus corpuscles, may be taken as an indication of tubular inflammation; and the pus cells possess the same significance so far as the nature of the process is concerned as do renal tubular epithelial cells. Such casts may be found in varying amounts in almost every case of catarrhal nephritis from the first to the last stage.

Such instances may serve to point out the general character of Mr. Whipple's book; almost every page is, however, open to some objection when he does not adhere strictly to the teachings of the older works upon which his book is based. The present edition cannot possibly be regarded as a success from a scientific point.

HISTORICAL SKETCH OF THE UNIVERSITY OF MARYLAND. By Eugene T. Cordell, M. D., of the class of 1868, Baltimore Press of Isaac Friedenwald, 1891.

This octavo volume, of some two-hundred and fifty pages, contain a history of the school of medicine from the year 1807 to 1890, inclusive, together with an introductory chapter, in which are recorded events preceding the founding of the college of medicine of Maryland in 1807;—also notices of the schools of Law Arts and Sciences, and Theology, and the department of Dentistry, and a general catalogue of medical alumni. There are likewise included some twenty illustrations and portraits and about seventy memoirs.

Special emphasis is laid upon the necessity of endowing the university, especially the medical department, and the author does well when he states that in order to make the rank of medical schools in this country, of the highest standard and their graduates worthy of the title "Doctor of Medicine," it is essential that the schools be fully endowed; for the scientific requirements of modern medicine demand a large outlay which cannot always be met by the mere fees of students, fluctuating and hence uncertain as they necessarily are, and without which support, most of the medical colleges as now conducted, would cease to exist.

The book is more than a *sketch*, as the author modestly titles his work,—it is a complete record of the medical school of the Maryland University, and therefore will receive undoubtedly a cordial welcome at the hands of the many alumni of the institution.

THE DISEASES OF PERSONALITY. By Th. Ribot, Professor of Comparative and Experimental Psychology at the College of France, and Editor of the "Revue Philosophique." Authorized American Translation, Chicago. The Open Court Publishing Company, 1891.

For the student of Psychology, this small volume contains much of interest. The contents are embraced in an introductory and five chapters. The titles of the latter are: 1. Organic Disorders. 2. Emotional Disorders. 3. Disorders of the Intellect. 4. Dissolution of personality; and finally the Summary.

The author is a well-known writer on Psychological subjects, as well as editor of a periodical devoted entirely to this study, which account for the masterly manner in which the difficult subject of the present volume is handled.

FOR SOFTENING EAR-WAX.

La Clinique recommends the following:

℞ Acid. Boric.....grv.
Glycerini.....
Aquæ.....aa ad ʒj
M. Ft. sol
Sig: Warm the solution and put 5 to 10 drops in the ear twice a day.

PERISCOPE.

THERAPEUTICS.

THE EMPLOYMENT OF GUAIAC AS A PURGE.

Murell (*Rev. Therap. Med. Chirurg.*, Paris, Jan. 15, 1891) attributes to guaiac laxative and purgative properties, believing it to be a stimulant to the liver and intestines. He has employed it with satisfactory results in several cases of biliousness and constipation. The drug was administered as a purge, in combination with honey, in doses of 60 centigrammes. This quantity was generally sufficient to produce a purgative effect. He reports a case in which the remedy produced a well-marked eruption of the arms and legs, accompanied with intense itching, but these symptoms disappeared on the suspension of the drug.

In order to avoid the disagreeable griping sensations which the medicant sometimes produces, Murell recommends a combination of the drug and extract of malt. The author believes, also, that if this preparation is triturated with cream of tartar, sugar of milk, or other inert substance, its efficacy may be observed when administered in small doses.

RADLAUER'S ANTISEPSINE.

According to the *Inter. Nat. Pharm. Gen. Anz.*, Jan. 30, 1891, this substance is a combination of iodate of zinc, zinc, and thymolic borax, brought about by treating these agents with antiseptic measures. Antisepsine produces the same antiseptic effects as iodol, thymol, boric acid, and the salts of zinc; it entirely supplements iodoform, carbolic acid and corrosive sublimate. Its advantages are as follows: 1. While it is a powerful antiseptic it does not possess toxic properties, nor are its marked effects ever of a poisonous nature. 2. It is free from bad odor, and it exercises no local irritant action. 3. It is easily soluble in absolutely clear water It is a whitish powder, its price being reasonable, more so than that of iodoform, iodol or aristol.

THE TREATMENT OF LUPUS.

H. Leboir (*Journal des Maladies Cutanées et Syphilitiques*, Jan., 1891) divides the treatment of lupus into *two* great classes: The local and the internal treatment. The first he again divides into the surgical, the medical and the mixed treatments. This last one is preferred by the author in the majority of cases.

In the surgical treatment five methods are employed, as follows: ablation, scraping, scarifications, cauterizations, and electrolysis. In the application of all these methods, local and general anæsthetics are used. With regard to the employment of germicidal and caustic agents, the latter are preferred. In general, the local medication is not regarded favorably by the author; on the contrary, the mixed treatment, chiefly made up of cauterizations and the local applications of iodoformed ether should be the base for the general treatment of lupus.

The general treatment should be looked upon as an adjuvant to the local one. That treatment may be reconstructive and specific, in the first case, cod liver oil, arsenical preparations, sulphur, and other alteratives may be administered, and in the second, iodoform, iodol, and creosote may be employed together with subcutaneous injections of iodoform. In regard to the Koch remedy, the author has formed no definite opinion, but as that agent appears to possess an elective action towards lupus, it may be employed for the present, as an element of diagnostic value.

ACTION OF ANTIPYRETICS.

The action of antipyretics may be supposed to be due to the limitation of the oxidation processes and consequent lowering of heat development, or to an increase in the heat radiation from the surface of the body. Moreover, they may have a purely local action,—*i.e.*, on the cellular tissue,—or they may influence the nerve-centres, regulating the development or radiation of heat. Messrs. Sawodowsky and Podanowsky consider that they have proved that the lowering of temperature produced by antipyrine and antifebrine is attributable exclusively to their influence upon the brain-centres regulating the temperature, which are believed to exist in the corpus striatum (*Apot. Zeit.*, February 11, p. 87). The authors cut the brain of an animal through close behind the corpus striatum and thalamus opticus, so as to isolate the organism from the heat-centres, while the connection with the respiration and vasomotor centres was retained. Although the animal so treated lived for some time, and the arterial blood-pressure and breathing remained unaltered, the body temperature fell continuously. Even injections of the most powerful pyretics, such as putrescent matter, caused not the slightest rise of temperature,

although all the other symptoms of putrescent infection were present. Equally powerless were antipyrine and antifebrine to hinder in the slightest degree the fall of temperature. The skin temperature also remained entirely unchanged, although in the case of normal animals this rises considerably after the injection of antipyretics. An apparent exception was noticed in the case of quinine hydro-bromide, but this was attributed to the known action of bromine. The conclusion drawn by the authors is that the action of quinine salts—resorcin and thallin—in lowering the temperature is dependent upon their specific influence upon the temperature regulating centres situated in the anterior part of the base of the brain.—*Pharmaceutical Journal and Transactions*, February 28, 1891.

JAMBUL IN THE TREATMENT OF DIABETES.

Among the newer drugs which have been suggested for the treatment of diabetes mellitus, the seeds of Eugenia jambolana, Lamarck, a tree of the family myrtaceæ, growing in Java, the Molucca and Philipine Islands, and in parts of India, have been most favorably commended by several English and American writers, most notably by Scott (*British and Colonial Druggist*, 1887). The chief advantage of the drug, as expressed by these observers, was the possibility of controlling the excretion of sugar, without the necessity of restricting the diet. A careful study of the subject has recently been undertaken by Villy (*Bulletin général de Thérapeutique*, Jan. 30, 1891), whose observations throw considerable light upon the chemistry and clinical action of this drug. Although as large a dose as an ounce to an ounce and a half of the seeds has been given to the adult in twenty-four hours, no case of poisoning has been recorded; and the author finds that a rabbit may be given its own weight of the drug within twenty-four hours without disturbance of its nutrition.

Contrary to the observations of Scott, it was demonstrated that jambul favors and hastens saccharine fermentation at a temperature of 70°. The same result was noted in experiments made at the normal temperature of the human body, but the process was somewhat more slow. Judged, therefore, simply by the result of experiments outside of the body, the drug would appear to be ill-suited to the indications of the disease.

His clinical observations are interesting, and seem to show that the applicability of this drug is quite limited. As long as the ordinary diet is permitted, the use of jambul is dangerous, as favoring the persistence of polyuria and increasing the excretion of sugar and urea. In cases of moderate degree, with or without azoturia, in stout and gouty patients, jambul seems to be of value, provided that at the same time an exclusive diet is maintained. In this respect the drug does not differ from other therapeutic agents employed in this disease. Most frequently sugar disappears rapidly from the urine, but reappears almost as soon as the medication is suspended.

In grave cases, where regulation of the diet appears to be without effect, jambul, like other remedies, is of no value. The powdered seed is well borne by the stomach to the amount of 150 to 320 grains, in divided doses, in the twenty-four hours.—*Univ. Med. Mag.*

TREATMENT OF TUBERCULOUS BRONCHITIS BY HYPODERMIC INJECTIONS OF IODOFORM.

Influenced by the action of iodoform on pus globules, Dr. Gavoy announces in the *Gazette Médicale de Paris* for February 28, 1891, that in 1887 he was led to test this remedy in pill form in tubercular bronchitis, but the gastric distress and nausea caused by the administration of the remedy compelled him to substitute enemata for the internal administration in the pill form, and he has now, for various reasons, substituted for these methods the hypodermic method. He states that at the outset he employs, morning and evening, a hypodermic injection of a quarter of a syringeful of a solution of 1 part of iodoform in 100 parts of oil of sweet almonds. In very few cases, he states, is any febrile reaction produced, and the results obtained in the majority of cases are excellent. He maintains that in his use of this remedy the cough rapidly diminishes; muco-purulent expectoration, so characteristic of this specific catarrh, becomes more fluid, and finally ceases almost entirely; alteration in the character and hoarseness of the voice disappear; the lungs become more permeable to air; inspiration becomes deeper; the vesicular murmur acquires another character, and subcrepitant moist râles disappear, nocturnal sweats cease, the appetite returns, and the patient's general health improves. In fact, he states, that progressive improvement in the majority of cases indicates in the most positive manner arrest of this broncho-pulmonary catarrh of phthisis.

He states that the examination of the sputum for bacilli is not an indispensable criterion for this therapeutic process, for the presence of the bacilli can only be exceptionally located at the onset of tubercular bronchitis, and, although the bacilli may exist in small closed cavities in the lungs, they only appear in the sputum when the ulceration has communicated with the bronchi. Further, iodoform is said to have the power of liquefying the more or less solid obstruction in the alveoli. He suggests that the therapeutic action of iodoform on caries of bone and on pus globules permits of the supposition that it may exert an analogous action on yellow tubercle and during the stage of softening, a condition which might be described as a caries of the lung. Although iodoform is an active antiseptic agent, it does not appear to have any direct action on the bacilli of tuberculosis other than in modifying the character of the tissues in such a manner as to delay or prevent the reproduction of the bacilli, and in aiding the elimination of the results of tissue breaking down, and favoring the cicatrization of ulcers seated in the alveoli. He recommends in the warmest terms further tests with this remedy in this connection.—*Therap. Gaz.*

ON THE UTILIZATION OF THE FOOD IN CASES OF GASTRIC DISEASES.

Dr. C. Noorden (*Ztschr. f. Kl. Med., Bd.* xvii.) has made some experiments to determine what becomes of the food in functional gastric disorders after it has left the stomach. He selected seven patients in whom the production of hydrochloric acid had been reduced to a minimum, and in whom the food was so rapidly carried into the intestine that even if lactic acid fermentation had occurred, it could not have attained a degree sufficient to peptonize albumen in the stomach. Propepsin was formed in all of the cases in abundant quantities. These experiments demonstrate that even in cases where no pepsine or hydrochloric acid is secreted the intestine is capable of completely fulfilling the office of the stomach. The reduction of the bodily weight observed in cases of chronic gastric disease is attributed by the author to an insufficient supply of food, since the two other factors which might be held responsible for it, viz.: the formation of toxines, and the excessive decomposition of the albuminous substances in the intestines, owing to fermentation resulting from the diminished disinfectant power of the abnormal gastric juice, can be excluded. The hydrochloric acid secreted in the stomach does not exert any disinfectant properties beyond the boundaries of that organ, and has no part in intestinal disinfection. The theory of motor insufficiency of the stomach in gastric catarrhs is controverted by the author, on the ground that this condition rapidly disappears as soon as fermentation in the stomach is arrested. The delay in stomach evacuation is attributable to the action of organic acids in producing spasms at the pylorus. Noorden recommends in the therapy of chronic gastritis the administration of a regulated quantity of albumen, fats and carbohydrates, sufficient being given only to maintain the general nutrition, and states that by the avoidance of all superfluous nutriments we will favorably influence the local affection. The lack of appetite should be overcome by the patient's own will power. Stimulant stomachics, especially orexin, should not be given, on account of their harmful effects. Rest in bed is indicated, for the reason that less food will be consumed and the stomach less taxed. The food which is best adapted to supply the body with fats and carbohydrates is milk, especially if fortified by the addition of butter and lactose.—*St. Petersburger Medic. Wochenschr.* No. 1, 1891.

CHLORALAMID.

Dr. W. G. Killebrew, in the *Memphis Medical Monthly*, states that he has used chloralamid in hysteria, acute mania, monomania, typhoid fever, also in surgical operations, and when unattended with much pain, with as good results as could be hoped for in all cases. He has used it in cases of insomnia and neurasthenia, and found that it produced all the sleep necessary, patients feeling much refreshed the following morning, with no after effects that he could discern. He noticed only two instances of delayed action, and in these two cases the hypnotic effect was continued into the next day, a result so frequently noticeable in the administration of sulfonal. His deductions were these: That in any case, almost without exception, unattended with pain, it would produce sleep. That its analgesic power, though slight, would meet a good per cent. of cases attended with pain.

Compared with chloral:

1. It is more agreeable to the taste and consequently more easily administered.
2. Rarely causes digestive disorders.
3. Does not depress heart or circulation

4. Seldom produces cerebral disturbances.

As compared with sulfonal :

1. Much more prompt in its action.

2. Being more soluble it can be administered more easily.

3. Sleep nearly always passes away by morning.

4. It is only about one-half as expensive.

DIPHTHERIA, WITH SPECIAL REFERENCE TO ITS TREATMENT WITH HYDROGEN PEROXIDE.

Whether the false membrane in the throat be the primary source of infection or the local manifestation of a constitutional disease, says Dr. Dickey, all agree that it is an element of great danger, and has to be removed as quickly and as thoroughly as possible, and at the same time doing as little violence to the surrounding healthy tissue necessary. The poison invades very quickly any denuded or abraded surface, consequently much care should be exercised in whatever remedies we may use.

Peroxide of hydrogen is a colorless, tasteless liquid, and when applied to a diseased membrane, causes little or no pain, and Dr. D. knows of nothing in the whole materia medica that will dissolve the diphtheritic membrane so quickly and thoroughly, and yet leave the healthy mucous membrane intact.

Dilute it twenty-five per cent. (although it can be used full strength), and apply with an atomizer. This can be repeated until effervescence ceases, when the membrane will be found to have practically disappeared, leaving a whitish surface. If the nose is invaded, it can be applied there with equal satisfaction. Absorb all the watery secretions from the nostrils with blotting-paper or absorbent cotton, and then apply the peroxide. After using the peroxide, use a solution of chloral hydrate, glycerine, and water, either as a gargle or with an atomizer.

At the same time, bichloride of mercury, tincture of the chloride of iron, with or without chlorate of potassium, or such other remedies as may suit the judgment of the individual prescriber, or be applicable to the case in hand, may be used. The writer prefers the bichloride.

Coupled with this should be given good digestible food at regular intervals, of which milk should form the basis, and such stimulants, from time to time, as the individual case may demand. The constitutional treatment is not less important than the local, and consequently must be attended to from the outset. When the temperature exceeds 103 5°, sponge the entire body with tepid water as often as may be necessary to bring it below this point. Pellets of ice internally will allay thirst and relieve very materially the turgid condition of the blood-vessels, and should not be omitted. Ice may also be applied to the throat in a rubber bag or a bladder, relieving greatly the inflamed glands.—*Ann. Gyn. Pæd.*

MEDICINE.

ALBUMINURIA CAUSED BY ANTIPYRINE.

Dr. E. L. Thompson, in the *Virginia Med. Monthly*, calls attention to a case of albuminuria caused by antipyrine.

A gentleman from New York came to Dr. Wm. A. Hammond's Sanitorium for Diseases of the Nervous System with locomotor ataxia. His urine was so heavily loaded with albumen that it almost solidified on boiling. There was so much œdema of the lower extremities that he could hardly put on his shoes; and there was also considerable puffiness under the lower eye-lids. Dr. Thompson found that he had been taking for some time, nearly every night, large doses of antipyrine—often as much as sixty grains a night. This would always stop the ataxic pains. Dr. Thompson examined his urine twice a day, and found much albumen in the morning, and very little or none in the evening discharge. It was then, on questioning, he found out about the antipyrine. It was suspected that the antipyrine caused it, on account of there being no albumen in the evening. The antipyrine was stopped, and since then, the albumen has disappeared, and the œdema is much less.

TREATMENT OF PHTHISIS BY ARTIFICIAL ATMOSPHERES UNDER PRESSURE.

A paper by M. Germain Sée on the subject of the treatment of phthisis by continued inhalation of medicated air under pressure, appears in the *Bulletin de l' Académie de Médicine*, No. 15, 1891. The drugs used were creosote and eucalyptol, their origin and action being fully referred to in the paper. The patients were placed in a closed chamber into which air was forced to an increased pressure of about half an atmosphere, after passing through a solution of the drugs. The pressure was increased gradually, and the sittings were prolonged to two, three, or more hours according to the patient's feelings. They took place every day, and the effect upon the general health was beneficial

rather than the reverse, whilst a very marked improvement was noted in the symptoms of the disease. Cases of phthisis in early as well as advanced stages were treated with satisfactory results. In two cases of fœtid bronchorrhœa of two years' duration, a complete recovery was brought about in the course of five weeks. M. Germain Sée claims for this method of prolonged inhalation under pressure that the actual absorption of the antiseptic drug is more complete, and approaches more nearly to the point at which it is assumed that morbific organisms may be annihilated. It is harmless in itself, and gives rise to no unpleasant consequences such as may follow the continued introduction of creosote subcutaneously or by the stomach. Inhalation of creosote vapor at ordinary atmospheric pressure has long since been proved to be insufficient for the purpose of checking the progress of tubercle. Improvement of appetite, gain of weight, diminution of cough and expectoration, and subsidence of fever would appear to be the most striking of the changes brought about by the treatment.—*Brit. Med. Jour.*

ANGINA PECTORIS: ITS NATURE AND TREATMENT.

Dr. R. Douglas Powell, in *The Practitioner*, argues that angina pectoris is a disturbed innervation of the heart or vessels, associated with more or less intense cardiac distress and pain, and a general prostration of the forces, always producing anxiety, and often amounting to a sense of impending death, and concludes that:

1. In its purer forms we observe disturbed innervation of the systemic or pulmonary vessels causing their spasmodic contraction, and consequently a sudden extra demand upon the propelling power of the heart, violent palpitation or more or less cramp and paralysis ensuing according to the reserve power and integrity of that organ—*angina pectoris vasomotoria.*

2. In other cases we have essentially the same mechanism but with the extra demand made upon a diseased heart—*angina pectoris gravior.*

3. The trouble may commence at the heart through irritation or excitation of the cardiac nerves, or from sudden accession of anæmia of cardiac muscle from coronary disease—*primary cardiac angina.*

4. In certain conditions of blood or under certain reflex excitations of the inhibitory nerves, always, however, with a degenerate feeble heart in the background, we may observe intermittence in its action prolonged to syncope—*syncopal angina.*

"TRAUMATIC NEUROSES."

"This is a convenient term, but, like other terms which are convenient, it is apt to include far too much. In this country the most important traumatic neurosis which is met with is no doubt the so-called, 'railway spine,' and it may be that cases placed in this category are as varied as those which Hoffman (*Berlin. klin. Woch.*, No. 29) found among a series of twenty-four cases of 'traumatic neurosis.' Of those twenty-four, ten were found to have undoubted signs of organic mischief; in six the symptoms were partly the result of exaggeration and partly of simulation; in eight there was malingering, proved to be so after careful observation for several weeks. The author protests against the use of the term for such varied conditions, pointing out that in a so-called traumatic neurosis we may have to deal with organic nerve injury, with hysteria, the result of injury, with shock to the cerebro-spinal system, with neurasthenia, or even with a true psychosis."—*Lancet.*

THE DIAGNOSIS OF MOTOR INSUFFICIENCY OF THE STOMACH.

Leo Silberstein (*Deutsche medicinische Wochenschrift*, February 26th) has recently made a series of experiments in Senator's clinic to determine the value of the salol test in estimating the motor activity of the stomach. The test is based upon the fact that salol when given by the mouth, is not absorbed in the stomach, but passes on unchanged to the bowel. There meeting an alkaline fluid, it is split up into phenol and salicylic acid, which latter is absorbed and afterward secreted in the urine. Its presence in the urine is detected by its violet reaction with chloride of iron.

Ewald's method was to give 15 grains of salol after the principal meal. Then in thirty minutes the urine was tested for traces of salicylic acid. He found that in healthy individuals the reaction always appeared in an hour at the latest. Any delay beyond this time indicated a slow passing of the salol into the bowel, or, in other words, a motor paresis of the stomach. Brunner, however, showed that Ewald's method was unreliable. His investigations proved that there was no fixed physiological time for the first appearance of the salicylic acid in the urine In the same individual under like conditions the interval may vary greatly

from time to time. These statements of Brunner were confirmed by Huber, who at the same time observed that in some persons the urine continued to show the presence of salicylic acid for a remarkably long time after the ingestion of the salol. This led him to think that perhaps the time of *disappearance* of the reaction might be more important than that of its *first appearance* in the urine. And, in fact, some experiments based upon this idea enabled Huber to state that an abnormally long duration of the salicylic-acid reaction pointed to a disturbance of the motor activity of the stomach. This theory, in turn, has been attacked by Decker and Pal, who believe that atonic and catarrhal conditions of the bowel may cause the prolonged reaction, though the stomach may be normal in all respects. Silberstein therefore proposed to repeat Huber's experiments, but on a much larger scale, and with special reference to the points raised by Decker and Pal. He made his first test of the urine twenty-four hours after the salol had been taken, and repeated it at intervals of six hours until he was satisfied that the drug had been entirely excreted. He insists upon the necessity of this procedure, stating that in some cases of marked motor disturbance of the stomach there was no reaction at the end of twenty-four hours, and yet after thirty or more hours had elapsed the reaction appeared. He made upward of 148 different experiments upon 76 individuals, and the following are his conclusions:

1. In healthy persons salol is entirely eliminated from the body within twenty-four hours.

2. In gastrectasia the elimination of the salol is always delayed, the reaction being invariably found after thirty-six hours. This is not the case when the stomach is simply displaced, hence this test serves to distinguish the dilated from the displaced organ, conditions which are easily confounded with each other.

3. In atonic conditions of the stomach there is also usually a delay in the elimination of the salol, but not to the extent noted in gastrectasia. It is the exception to find the reaction after thirty-six hours in cases of atony, whereas it is the rule in dilatation of the stomach. Here, again, this method is of diagnostic importance.

4. The condition of the bowels does not impair in any way the value of the salol test as modified by Huber.

Silberstein admits that Leube's method of examining the gastric contents two hours after a test breakfast is without doubt our best means of judging of the motor activity of the stomach. There are cases, however, in which, for one reason or another, it is impracticable to introduce a tube into the stomach, and in these the salol test may be relied upon as entirely trustworthy.—*N. Y. Med. Jour.*

THE DIAGNOSTIC SIGNIFICANCE OF VENOUS HUM IN THE NECK; A STUDY IN STATISTICS.

Dr. Bewley said he had been induced to collect statistics bearing on this subject by reading a paper by Dr. R. Apetz, "On the Significance of Venous Humming Murmurs for the Diagnosis of Anæmic Conditions," in *Virchow's Archiv.*, vol. 107. He called attention to the differences of opinion held on this subject—some writers attributing considerable diagnostic importance to the presence of a murmur; others believing the phenomenon to be one of no importance. Dr. Bewley then related the details of his investigation. He examined only healthy individuals; he only examined individuals between the ages of 16 and 26, because age has a very important influence on the production of these murmurs. All the cases were examined in an upright position, either sitting or standing. He divided his cases into three classes:—1. Anæmic. 2. Slightly or doubtfully anæmic, *i. e.*, cases which presented no appearance of anæmia, but yet suffered from some of the symptoms of this condition, or *vice versa*. 3. Not anæmic. He examined in all 51 young men and 149 young women. Of these 22 belonged to the anæmic class, 31 to the slightly anæmic, and 147 to the not-anæmic. In 22 anæmic there were 19 murmurs, equal 86·4 per cent. In 31 slightly anæmic there were 27 murmurs, equal 87·1 per cent. In 147 not-anæmic there were 85 murmurs, equal 57·9 per cent. Dividing up the not-anæmics into male and female—in 104 females there were 64 murmurs, equal 61·5 per cent. In 43 males there were 21 murmurs, equal 48·8 per cent. The conclusions Dr. Bewley drew from these statistics were the following:—1. Murmurs are more common in the anæmic than in the not-anæmic. 2. More than half of those young persons who are not-anæmic have a venous hum in the neck. 3. The presence of a hum is not of any diagnostic importance in any individual case. The loudness of murmurs is not a matter of much diagnostic importance. In his cases Dr. Bewley noticed 15 very

loud murmurs, distributed as follows:—In 22 anæmic, 3 loud murmurs, equal 13·6 per cent. In 31 slightly anæmic, 5 loud murmurs, equal 16·1 per cent. In 147 not anæmic, 7 loud murmurs, equal 4·8 per cent. He had noted some of the loudest murmurs in particularly rosy and full-blooded persons, and therefore did not attribute any diagnostic value to even the loudest murmur. He added that Dr. Apetz's conclusions based on very elaborate statistics, were almost identical with his own.—*Med. Press.*

ÆTIOLOGY OF BRIGHT'S DISEASE.

Dr. Agnes Bluhm has studied the apparent causation of all the cases of morbus Brightii and albuminuria that were treated in the Cantonal Hospital of Zürich, from the beginning of 1884 to July 1, 1889. The cases numbered in all 8,442, and after a careful analysis lead to the following conclusions: 1. The chief causes of acute Bright's disease are the acute specific fevers, and nearly all of these are liable to be complicated by nephritis. 2. The apparently uncommon occurrence of chronic Bright's disease as a sequel of acute infective diseases is due partly to non-pathological causes, but also in some measure to the latent and therefore undetected course of chronic nephritis. 3. The occurrence of nephritis as a complication does not depend on the intensity of the primary specific disease. 4. The course of the primary affection and that of the nephritis complicating it are not mutually related.—*Deutsches Archiv für klin. Medicin,* January 8, 1891.

A FORM OF GINGIVITIS COMMON TO MEN AND DOGS IN INDIA.

Surgeon J. R. Roberts, of the Indian Medical Service, describes gingivitis which is often mistaken for a symptom of scurvy, but which has distinct characteristics of its own, and is entirely a local disease. It is characterized by a bright red velvety condition of the gums; its almost invariable limitation to the front of the mouth; the ulceration that surrounds the bases of the teeth, generally the incisors, which process in advanced cases continues to extend, destroying the alveolus and exposing the fangs, until the teeth remain but loosely attached or drop out; the tendency to hæmorrhage on pressure or the slightest injury; the occurrence of an exactly similar process in dogs, remarkably limited in them to incisors and canines, whereby their small front teeth are frequently lost; the acid reaction of the mouth and the fetid odor given off.

Microscopic examinations of scraping show a large number of different micro-organisms. The disease is not limited to natives, but is common enough among British soldiers. Its worst effects are seen in a hot moist climate. The disease is essentially a slow chronic process. The treatment indicated is a light scraping of the ulcerations, touching them with strong carbolic acid or other antiseptic, and an alkaline mouth-wash.—*Boston Med. Surg. Jour.*

SURGERY.

TEMPORARY RESECTION OF THE CRANIUM.

Wagner (*Centralblatt f. Chirurg.*, 1891, No. 2) describes two cases in which he has used his method of "temporary resection of the cranium," first described in No. 47 of the above for 1889. Both cases, given somewhat in detail, demonstrate that the operation is very easy to do, and that the resected piece reunites both quickly and without reaction. In both instances the part resected was about one-fifth of the entire cranial vault, which leads the author to believe that a still greater amount will heal in the same way, and he would not fear to resect two-fifths or more if necessary. Naturally the isthmus of the flap must be correspondingly broader. Just as we have trephined, sometimes, the skull in different places, so we can make this temporary resection in one or more places. First, corresponding to the piece of bone to be removed, a curved incision is made whose ends converge toward each other. This flap must overlap the bone to be raised one-fifth to two-fifths of an inch. The soft parts retract, and the incision gapes in a sickle-shaped way, with the point toward the base of the flap. The flap is now firmly pressed upon the cranial surface, and the pericranium smoothly cut through along its border. With a small, fine chisel a little trough is made in the bone along the line of the incision. For the further steps of the operation, a moderately thick but small chisel, abruptly beveled on one side, is used. This is applied in an oblique manner. One can work his way through the cranium most quickly with this. When all the bone is chiseled through, a small, thin chisel is used to cut through that part of the bone covered by the isthmus of the flap. The skin and bone are now raised together with the aid of a small elevator. The replacing later on is very easy to effect.

When the chisel is applied obliquely, the inner circumference is naturally less than the outer. The soft parts are then sewed together with fine sutures, and one of the under angles of the wound left open. The suture line does not correspond with the bony defect, but is somewhat removed from it, the soft parts overlapping this, in accordance with the plan of the incision above mentioned. In this way an adherent scar between bone and skin is avoided.

Regarding the indications for "temporary resection," or "osteoplastic trepanation," the author regards it, in general, indicated wherever in the uninjured bone the cranial vault is to be opened, not only in cases where we expect with certainty or probability to find removable alterations, but where we only suspect them; for instance, many cases of epilepsy of doubtful traumatic origin. This form of exploratory opening of the cranium the author regards fully as justifiable and no more dangerous than exploratory laparatomy.—*Buffalo Med. and Surg. Journal.*

THE TREATMENT OF WHITE SWELLINGS.

Under this title, Lucas-Championnière has written (*Journal de Médecine et de Chirurgie*, Nov. 25, 1890) a very interesting paper, giving his views, based on a wide experience, as to the treatment of this variety of tubercular disease. He considers that the methods of treatment have been much modified by modern improvements, both as to therapeutic and operative measures. Topical treatment he regards as particularly happy in children, upon the development of whose bones operative interference exercises a disastrous influence. Immobilization he has found not to possess the beneficial influence generally attributed to it, and he thinks that while there are a certain number of cases in which it ought to be employed, it is, as a rule, abused. Its principal object should be to prevent deformity.

Care of the general health plays a principal part in the treatment, and the value of country or sea air must not be overlooked. As to the medicines to be relied upon, the iodide of potassium is mentioned as *the* one *par excellence*, while tonics, cod liver oil, quinine and arsenic are also useful. Iron is not spoken of with favor, and the iodide of iron does not, according to the writer, possess the virtues of iodide of potassium.

As to the direct treatment of the affected joint, revulsion, by means of the thermocautery, superficially applied, is considered a measure of the greatest value. The cauterizations are repeated about every fortnight, and are made to extend beyond the limits of the joint. Next to cauterization in importance, compression is mentioned. This is to be effected by means of flannel bandages firmly applied, and renewed as often as they become loose. Before the bandage is applied, the joint is first enveloped in a layer of either peat wadding (which has been found to best answer the purpose), oakum, tow, or wool, all of which are superior to cotton.

Of topical applications, mercury is considered the best, the use of iodine or turpentine being characterized as a mistake. The mercury is employed in the form of cerate, made according to an old formula of Scott, of Dublin, which is as follows: Soap cerate, one ounce; double mercurial ointment, one ounce; powdered camphor, one drachm. Championnière regards mercury as the principal source of success in the treatment, the absorption of the drug into the tissues of the part making possible its microbicidal action. Previous to the application of the cerate the skin is thoroughly cleansed and then rubbed with camphorated spirit.

After the dressing is made, if fixation is required, it is accomplished by means of a plaster bandage. If abscesses form in the course of the disease, they are not interfered with unless large, in which case they are opened under anæsthesia and washed out with a 5 to 8 per cent. solution of chloride of zinc. Sinuses are injected with the same solution, sometimes with an emulsion of iodoform, and, as a substitute for the latter, naphthol-camphor is mentioned.

Continuous extension is regarded as most seaviceable in the case of hip disease, and is employed, not only because of the relief of pain which it secures, but because it promotes the conditions which favor the possibility of cure.

As to operative treatment, when necessary, the view is taken that it should be complete, Arthrectomy is considered as hazardous and incomplete, while resection is spoken of as "the only and true operation for articular and osseous tuberculosis."

The paper concludes with an epitome of eighty-one resections, the results of the operations upon the knee-joint being particularly excellent. In no less than forty excisions of this joint cure was effected without the occurrence of any suppuration whatever. Antisepsis was rigidly carried out, and in order to prevent injury to the silver

wire employed to appose the ends of the femur and the tibia, carbolic acid solutions were substituted for those of bichloride generally used.—*Univ. Med. Mag.*

THE INDICATIONS FOR SURGICAL INTERVENTION IN TRAUMATIC HYSTERIA.

In an interesting article on the relations of hysteria to surgery, by Georges Guinon (communicated by Dr. Baaz), the author states that surgical interference in this affection is only indicated in cases of old contractures with formation of fibrous tissue, and also in persistent monoplegias with severe trophic disturbances. As a general rule, the surgeon is not called upon to interfere in hysteria, for the fact that a lesion sine materia is the cause of the symptoms and warrants us, in a certain sense, of expecting a favorable prognosis. The prognosis is never certain, however, as regards the possibility of a cure of the attacks, but we know that even when contractures have persisted for many years, we are not justified in giving up all hope of a cure. If the contractures are of spasmodic origin, they will sometimes disappear spontaneously during an attack, or may be relieved by massage, electricity, magnetism, or hypnotic suggestion. In all these conditions no surgical interference is demanded. The question comes up whether we are to interfere in cases where the contracture is associated, for example, with a shortening of tendons, with muscular atrophy and various trophic disturbances. On this subject opinions are still much divided. We may be tempted to divide the fibrous bands formed in a limb affected by contractures, but whether this is permissible must depend upon each case, and no general rule can be formulated. As long as a spasmodic conditon persists, no operation is warranted. To make sure whether a contracture is due to spasm or a shortening of muscles and tendons, the patient is placed under chloroform anæsthesia, which will show to what extent the contracture depends upon spasm and shortening. The surgeon is not justified in interfering until all spasm has ceased.

In his lectures, Charcot reports a case in which attempts were made to affect a cure by stretching of the nerves. The result was not satisfactory. Sometimes these patients request from their physicians procedures of much greater severity. Thus one of Debove's patients, in whom a spasmodic contracture of the arm had resulted from application of a splint, urgently demanded an amputation, on the ground that the limb was perfectly useless. The extremity presented a deplorable appearance, the muscles had atrophied, but gave no degeneration-reactions, the nails had deeply penetrated the palm of the hand in consequence of the spasm, and had produced unhealthy ulcers. Debove brought the case before the Societé Médical des Hopitaux, and asked the advice of the members regarding its treatment, and most of those present spoke against an operation.

In general we may say that, in hysterical subjects, the surgeon is only called upon to intervene when he has to deal with the sequelæ of a former neurosis. He should not attempt to treat the hysterical affection by surgical means. The relations of hysteria to surgery are numerous, and may be illustrated in the following conclusions:

1. Traumatisms which do not require the direct intervention of the surgeon, but are capable of evoking a number of surgical affections, may, in persons predisposed thereto, produce hysteria and hysterical manifestations which may bear a deceptive resemblance to diseases belonging to the domain of external pathology.

2. On the other hand, the surgeon may give rise to hysterical seizures by operations undertaken for curative purposes.

3. The surgeon may be inclined to interfere in conditions of hysterical character, but the indications and contra-indications to operation should be based upon a thorough knowledge of hysteria.—*Wiener Mediz. Presse.*

GYNÆCOLOGY.

AN ENORMOUS OVARIAN CYST.

There has recently been a patient in the obstetric ward of St. Thomas's Hospital, under the care of Dr. Cullingworth, suffering from an enormous ovarion cyst. She was a widow aged forty-five, who had had no children, and who had been the stewardess on a well-known line of Channel steamers for many years. The swelling of the abdomen was first noticed nine years ago; for three years and a half it had been so large that she had been unable to go beyond her own garden; for two years she had not left her room, and for six months she had not been out of bed. She had persistently refused operation until recently. After admission on April 9th the abdomen was found to be uniformly and enormously distended by a fluctuating swelling, consisting of one large cyst, distending the lower part of the thorax, and hanging down, as she sat in bed, as far

as the knees, completely concealing the thighs. The girth 1½ in. above the umbilicus was 67 ins.; the measurement from the ensiform cartilage to the symphysis pubis was 38 ins. The body was greatly emaciated; she presented a most remarkable appearance, but was very cheerful. There was some albuminuria. On April 13th, preparatory to operation and in order to diminish the shock, the abdomen was punctured by a fine trocar, attached to a long India-rubber tube, with the lower end placed under a measured quantity of solution of carbolic acid, and the fluid from the cyst allowed to flow away for seven hours. Seventy-four pints of thick grumous chocolate-colored fluid escaped, containing much altered blood. The day after this an attempt was made, under ether, to remove the tumor. The whole of the anterior surface of the cyst was adherent to the abdominal wall. There were comparatively few adhesions posteriorly, but more in the pelvis. At the end of half an hour the patient became seriously collapsed and the cyst was quickly extracted. It was a large thick-walled single cyst of the left ovary. The patient died before the closure of the abdominal wound had been completed, in spite of persistent efforts at resuscitation. The total weight of the tumor and its contents—including that of the fluid removed on the previous day—was 154½ lbs., or 11 st. ½ lb. The weight of the patient was not ascertained, but must have been much less than this. This is probably the largest abdominal tumor of which there is any record; the largest mentioned in the series of 1,000 by Sir Spencer Wells did not weigh more than 125 lb.—*Lancet.*

BAGOT ON MASSAGE AS APPLIED TO THE TREATMENT OF INCONTINENCE OF URINE IN FEMALES.

A full account is given of the treatment of this affection by Brandt's method, by Sänger's method (which consists in dilatation of the vesical sphincter and massage), and also by distension of the bladder with warm water, as practiced by Nissen and H. Marion Sims. The author has cured three cases by the use of Brandt's system, omitting some of the steps which he considered useless. The most essential part of this method of treatment was the direct treatment of the neck of the bladder by the finger in the rectum or vagina. In children the finger was used in the rectum.

The first patient had suffered more or less from incontinence of urine since her last confinement, eighteen months ago, but had become much worse during the last nine months. She was treated at first every day for four days by Brandt's system, omitting "the lifting of the bladder." After this she was treated sometimes every second and sometimes every third day for twenty-nine days. At the end of this time a permanent cure was effected.

The second case, an unmarried woman of twenty-four, had suffered from incontinence from childhood. She was treated by Brandt's method, omitting the "exercises for the adductors of the thighs" and the "bladder lifting," every second day for five weeks, at the end of which she declared herself quite well, and was discharged.

The third case was a woman of forty, who had ten children, and had suffered from incontinence for three years. The treatment in this case lasted four weeks. Dr. Bagot's reason for discarding the "bladder lifting," altogether, was because, from what he had seen during laparotomies, he knew that it would be impossible to sieze hold of the bladder when in an empty state, and elevate it by the manœuvre described by Brandt. The "exercises for the adductors" might be of use in those cases where the pelvic floor was greatly relaxed, and even in these, though it was probably of use in bracing up the parts, it was not an essential in the cure of either enuresis or of uterine displacements. The chief part of this method, as applied to enuresis, was the direct treatment of the neck of the bladder. The method of Sänger was one to which the author wished to draw special attention. Dr. Sänger considered that the basis and cause of this affection consisted in a weakness or paresis of the vesical sphincter, and perhaps a certain tenuity of the muscular bundles. This method was not indicated where there was very great dilatation of the bladder neck and whole urethra. In these cases, artificial removing of the urethra in some way was more likely to succeed. Dr. Bagot had treated two cases by Sänger's method.

Massage, by distension of the bladder with warm water, was of use in case of contraction of the bladder, following long-continued incontinence of urine from any cause, the holding capacity of the bladder being then diminished.

While recommending these treatments, Dr. Bagot urged the necessity of careful diagnosis in every case, and that the cystoscope should be more generally used.—*Med. Press.*

OBSTETRICS.

IODOFORM GAUZE IN POST-PARTUM HÆMORRHAGE.

Dr. Velitz, of Buda-Pesth (*Orvosi hetilap*, 1890, Nos. 10 to 12) describes thirteen cases where he employed plugs of iodoform gauze for flooding, during and after delivery, and (in two cases) in the course of the puerperium. He finds that iodoform gauze is a perfectly aseptic medium in obstetrics. It is of permanent value as a hæmostatic in flooding from atony of the uterus. Only a small amount of the gauze should be packed in the uterus, so that retraction of that organ may not be hindered. Iodoform gauze is useless, and indeed dangerous, in uterine hæmorrhages due to abnormal condition of the blood. Being hygrometric it promotes hæmorrhage. In this form of flooding weak solutions of perchloride of iron act best. Hæmorrhage from high laceration of the cervix can only be safely checked by aid of the suture. When bleeding occurs after delivery or late in childbed, through the presence of a fibroid, the only effectual check is a thorough plugging of the uterine cavity with iodoform gauze; the cavity must be well stuffed with that material.—*Brit. Med. Jour.*

FETID MILK IN HUMAN MAMMARY GLANDS.

Dr. Jorissenne had under his care in 1874 a patient of slightly tuberculous aspect, though now, in 1891, she is in good health. On October 5, 1874, she was delivered by forceps. She suckled her child freely till December 7th, when she was absent from it for seven hours and a half. This space of time included a drive one hour long, five hours and a half walking, and one hour's rest for refreshment. Immediately on her return home she gave her child the breast. The milk was horribly fetid—like rotten eggs. It made her feel ill, and her relatives could not stay in the same room with her. Yet the infant sucked with avidity; however, it was violently sick. Next day the milk was sweet, and the child and also the mother quite well. The breasts showed no sign of hardness, engorgement, etc. The nipples were healthy. The patient told Dr. Jorissenne that on several previous occasions she had noticed that when she delayed giving the child the breast at the usual times the milk became fetid. Dr. Jorissenne had no further opportunity of observing this putrefaction of milk, as it did not recur. The patient was red-haired; but he has carefully examined the milk of many red-haired women since 1874, and failed to find that it showed any special tendency to putrefy or even turn sour, in the open air or in a close room, more quickly than the milk from a black or fair-haired woman. The avidity with which the infant imbibed the putrid milk was remarkable; its stomach was more sensitive than its nose and tongue. Evidence as to the acuteness of taste in the infant is imperfect. During the first few days of extra-uterine life the sense seems undeveloped. The child will take solutions of raw salines without syrup, though a few weeks later it will reject the same compounds nicely flavored. The sense of sweetness is early developed. At the end of a few weeks an infant likes sugar, and dislikes cow's milk unless sweetened artificially. Children of six months, or older, will lick ill-tasting colors off their toys. In Dr. Jorissenne's case, the child liked a milk that smelt intensely fetid and must have tasted nasty, according to an adult's idea of taste.—*Archives de Tocologie.*

DURATION OF PREGNANCY.

Oliver concludes, after very careful observation, that the duration of pregnancy in the human female varies as much as it does in the case of many of the lower animals. Issmer, reckoning only cases in which the fœtus was well developed, asserts that the duration ranges from 260 to 304 days. But Oliver believes there must be some error in this statement. If we reckon from the last menstruation, we must be careful to ascertain the exact date of the cessation of this, for it will be remarked that where the duration of the discharge varies little, the woman, when asked, is more likely to give the date of beginning than the date of cessation of the last menstruation, and in this way mistakes may arise in our calculation to the extent of four or more days. The majority of authors are agreed that in reckoning the duration of pregnancy in woman, we ought to fix the probable date of delivery on the 278th day from the cessation of the last menstruation. He is of the opinion that the best results will be obtained by ascertaining, first, the date of the cessation of the last menstruation, and then the usual duration of the inter-menstrual period in each given case; the number of inter-menstrual days should then be divided by two, and it will be found that the 260th day from the middle of the inter-menstrual period will most

probably be the date of confinement.—*Liverpool Medico-Chirurg. Journal.*

PÆDIATRICS.

THE PREVENTION AND TREATMENT OF SCARLET FEVER.

Dr. W. Bezly Thorne, in the *Lancet*, says, the prevention, treatment, and, perhaps, the cure of scarlet fever are of so great importance to the medical profession and the public at large that he ventures to offer for publication the following brief notes of a case which was under his care at the commencement of this year. If it stood alone, he would be compelled to admit that no practical conclusion could safely be drawn from it; but he has since gathered, from the perusal of a paper read before the Epidemiological Society by Mr. J. Brendon Curgenven, that many other cases of the same disease have been somewhat similarly treated with the like striking results, and he thinks that it cannot fail to serve a useful purpose to invite others who have practiced the treatment advocated by Mr. Curgenven to bring forward the results which they have obtained.

The patient, fourteen years of age, but of the physical development of ten, was seen within little more than an hour of the appearance of the rash, and was reported to have been "bilious and shivering over the fire" for something more than two days. The face was flushed and dotted with a scarlatiniform rash; the eyes were red and suffused, and both tonsils swollen, inflamed and ulcerated; the pulse was 120 and the temperature 103°. She was immediately ordered to take internally every four hours five minims of the oil of eucalyptus globulus emulsified with powdered acacia, to use every hour a gargle of carbolic and tannic acids suitably diluted, to undergo daily inunction with an emulsion of eucalyptus oil of the strength of half a drachm to the ounce, and made up of glycerine, to promote adhesion to the skin, and to have the scalp and hair daily sprinkled with a spirit lotion containing eucalyptol, with a small quantity of almond oil. On the following morning—that is, in rather more than twelve hours—Dr. Thorne found that the rash had receded from the face. He inquired of the nurse whether any was to be seen on the chest, which she had washed and anointed two hours previously, and was informed that it was "well out," but on examining that region found that it presented absolutely none. It was at that time making its appearance on the lower extremities, was well marked in the evening, and on the following morning had entirely disappeared. No desquamation followed. The chart tells the rest with sufficient detail. It should be added that although the house was occupied during the illness and up to the departure of the patient to the seaside on the twenty-second day by six full-grown adults and four younger persons whose ages range from nineteen to six, besides the sick one, the infection has not spread. A sheet, which was from time to time moistened with a dilution of sanitas, was fixed by the nurse to the door of the sick room in accordance with the instructions of the institution from which she was sent.

HYGIENE.

THE TRANSMISSIBILITY OF HYDROPHOBIA FROM MAN TO MAN.

The fact that no instance is on record of hydrophobia having been transmitted from man to man has given rise to a doubt as to whether the saliva of human beings suffering from the disease possesses the same virulent properties as that of the dog similarly affected. In not more than five or six of the ten thousand patients treated at the Pasteur Institute was the lesion due to bites inflicted by human beings, and it is evident that statistics bearing on so small a number of cases are of no value one way or the other. It has, however, been proved experimentally, that the saliva of human beings, having succumbed to hydrophobia, produces the disease in animals by inoculation, though the incubation period is somewhat prolonged. It may, therefore, be taken as proved that the disease may be transmitted in this way from man to man. It is hardly possible as yet to affirm categorically the possibility of curing hydrophobia after the characteristic symptoms have made their appearance, but recent observations throw a doubt on the incurability of the disease even under these circumstances.—*Med. Press.*

VOLUNTARY CONSTIPATION.

In an article in the *Revue de l'Hypnotisme*, entitled "Voluntary Personal Uncleanliness," Dr. Galippe calls the attention of the authorities to the necessity of reforming the sanitary arrangements obtaining in most French educational establishments. Some facts related by him in this connection will be read with astonishment by those who are

not familiar with the horrible filthiness of most French closets. He says, "We need hardly remind the reader of the disgusting filthiness of most (school) closets, and I have known sensitive children who refuse to repair to these places until they were absolutely obliged to do so, such is their horror of the stench that there assails their nostrils, and the dirt they may bring away with them. I have known of many children who have suffered much from this voluntary constipation, and of others who, affected with diarrhœa, have for a whole week passed their motions into their clothing." Dr. Bourneville, in a notice of this article (*Progrès Médical*, February 14th) says that he has for years urged the necessity of endowing not only schools but also hospitals and barracks with decent closets. He has endeavored to convince the French public of the feasibility of such a stupendous feat by having constructed for his idiot and imbecile child-patients at the Bicêtre closets, the cleanliness of which strikes the French visitor with astonishment. M. Bourneville also demands for each school a complete set of bath-rooms, and calls for regulations rendering the use of a bath obligatory on the scholars.—Paris Correspondence of *The Lancet*.

MEDICAL CHEMISTRY.

ISOLATION OF A CHOLERA TOXINE.

Hermann Scholl (*Berlin. klin. Woch.*, October 13th, 1890) communicates an interesting paper giving the results of some experiments with a poisonous body isolated from cultivations of the cholera bacillus. He thinks it curious that in all previous investigations on the nature of the cholera toxine cultivations should have been used which had been grown in the presence of air, whereas, in his opinion, in order to imitate the conditions under which the cholera bacillus grows in the human intestine, the most essential point is that the culture be grown in the absence of air. In this assumption he follows Hueppe and Cartwright Wood, who, he considers, have satisfactorily shown that the cholera bacilli grow in the small intestine in the absence of oxygen, and that their extreme virulence or rapidity of poison production depends chiefly on this anaerobic growth. Other observers, among whom Petri may be cited, think that this point requires more rigorous proof than has yet been afforded. To obtain this anaerobic growth the author used the method introduced by Hueppe of growing the bacilli in raw eggs, by which means he holds that oxygen is completely excluded. The inoculated eggs were kept for eighteen days at a temperature of 36° C. When opened the contents were found to give off a very powerful smell of sulphuretted hydrogen, differing in this from cultures grown in air. He describes the white of the egg at this period as being fluid and watery, the yolk firmer in consistence and black in color. In order to test the toxicity of the egg contents 5 cubic centimetres of the fluid part were injected into the peritoneal cavity of a guinea-pig. The animal at first showed signs of paralysis, then convulsive movements, and died at the end of forty minutes. This proved that the fluid egg albumen was very poisonous. The author then proceeds to describe his method of isolating the poison. Shortly, it is as follows: The fluid part of the egg contents, which amounted to 150 cubic centimetres, was dropped into ten times its volume of absolute alcohol. The white precipitate thrown down was collected and digested with 200 cubic centimetres of water at 40° C. The effect of this was to dissolve only a very small quantity of the precipitate, which was then removed by filtration. Eight cubic centimetres of the transparent filtrate were then injected into the peritoneal cavity of a guinea-pig, and caused death in one minute and a half. This fluid entirely lost its poisonous properties on being boiled in the steam sterilizer for half an hour, whilst a short heating to 75° C. had no such effect. On the other hand, when placed at 40° C. *in vacuo*, over chloride of lime, the fluid was found next day to be completely inert. The author then subjected the poison to the usual chemical tests, and came to the conclusion that it was no ptomaine, but a peptone, differing, however, from the toxo-peptone isolated by Petri from aerobically grown cultivations. This peptone could be obtained in a solid form by dropping the watery solution into 8 to 10 times its volume of a mixture of the ether and alcohol, rendered faintly acid by acetic acid. The resulting precipitate was found to be insoluble in pure water, but soluble on the addition of an alkali. After repeating this precipitation and re-solution several times, pure ether was substituted for the mixture of ether and alcohol, and the peptone obtained after evaporation as a white bulky substance. A very small quantity of this dissolved in water was then injected into the peritoneal cavity of a guinea.pig. The

animal at once became totally paralyzed. After half an hour convulsive movements of the head and extremities set in, and, at the end of five hours the guinea-pig died. The author concludes, as the result of his experiments: 1. That the poisonous peptone, elaborated by the cholera bacilli under conditions of anaerobiosis from the albumen of the egg, is different from the toxo-peptone of Petri, since the latter was not decomposed on boiling, while the former was. 2. That this cholera pepto-toxine is much more poisonous than the toxines found by Brieger and Petri in cultures grown under aerobic conditions, since the poison obtainable from a single egg was capable of killing ten guinea-pigs in the space of ten minutes. 3. That these experiments are in favor of the contention of Hueppe and Wood that the cholera bacilli, when grown anaerobically, form a greater quantity of, and a more powerful, poison than when grown aerobically.—*Brit. Med. Jour.*

NEWS AND MISCELLANY.

THE MEDICAL NEWS.

Dr. Geo. M. Gould has succeeded Dr. Hobart A. Hare as editor of the *Medical News.*

VALEDICTORY ADDRESS AT THE YALE MEDICAL SCHOOL.

Dr. John S. Billings will deliver the annual address at the Yale Medical School on the Tuesday before the commencement.

RESIGNATION OF PROF. H. W. WILLIAMS.

Dr. Henry W. Williams has resigned the Professorship of Opthalmology in the Harvard Medical School, which position he has held for twenty years.

THE NEW HAMPSHIRE MEDICAL SOCIETY.

The New Hampshire Medical Society will hold its one-hundredth annual meeting at Concord on the 15th, 16th and 17th of June. The first two days will be devoted to literary work, and the third day to general business.

LEPROSY IN RUSSIA.

The rapid extension of leprosy in Russia has excited the alarm of the authorities, and the Town Council of Riga has voted a sum of 60,000 roubles to establish a Hospital for lepers, which is to be inaugurated in July. —*Ex.*

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

The Trustees of the American Medical Association have elected Dr. J. C. Culbertson editor of the *Journal.* Dr. Culbertson was for many years editor of the *Cincinnati Lancet-Clinic.* He assumed his duties on May 14th.

THE PROPOSED PAN-AMERICAN MEDICAL CONGRESS.

The proposition made at the last meeting of the American Medical Association by Dr. Chas. A. L. Reed, for a Pan-American Medical Congress, has met with much approval, and it now seems likely that this worthy project will be carried out.

THE JEFFERSON MEDICAL COLLEGE.

Dr. J. M. Da Costa and Dr. Roberts Bartholow have been elected Emeritus Professors in the Jefferson Medical College. Although Dr. Da Costa has given up the chair of Practice he will continue his valuable clinical lectures in the Jefferson College Hospital.

THE INTERNATIONAL HYGIENIC CONGRESS, 1893.

A movement is on foot, at Buda Pesth, to have the meeting of the International Hygienic Congress, in 1893, held in that city. Professor Fodor is taking an active part in furthering the scheme, and the Hungarian Government has already been approached unofficially on the subject.—*Ex.*

THE CROONIAN LECTURES.

Dr. Burdon Sanderson will deliver the Croonian Lectures of the Royal College of Physicians "On the Progress of Discovery relating to the Origin and Nature of Infectious Diseases during the last Twenty-five Years." The lectures will be given on June 9th, 16th, 23rd and 30th, at the Examination Hall, The Savoy, London. Considering the reputation of the author and the subject, these lectures will doubtless prove of exceptional interest.

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CLINICAL LECTURE.

CONSUMPTION AND EMPHYSEMA—PLEURITIC EFFUSION—RHEUMATIC NEURITIS.

BY WILLIAM PEPPER, M. D., PHILA.,
PROFESSOR OF CLINICAL MEDICINE NIVERSITY OF PENNSYLVANIA.

CONSUMPTION AND EMPHYSEMA.

Gentlemen:—The first case that I shall call to your notice to-day, is that of a man of about forty years old. Until two years ago he has enjoyed fairly good health, when he caught cold, and had a persistent cough which lasted for several months. He also expectorated a large amount of purulent sputa, of a yellowish color. These symptoms, however, began to improve until in January of this year he took a fresh cold. The symptoms all became aggravated. The patient's cough increased, he raised a considerable amount of blood, his appetite failed him almost completely, and he gradually grew weaker and weaker. There were no night sweats.

Regarding the physical signs of this patient, we first notice that the color of his face is good. His finger nails are somewhat large and bulbous. This point alone has considerable diagnostic value, for these peculiar finger nails are often met with in cases of long standing lung trouble, and more frequently in chronic phthisis than in any other disease. The patient says that the trouble has always been on the left side. His sputa contains tubercle bacilli. In comparing the movements of each side of the chest, it will be seen that the right side expands more than the left.

You see that with very little effort we have already observed several important physical signs which will materially assist us in forming a diagnosis, as well as prognosis. These are the good color of the complexion, the peculiarity of the finger nails, and the decrease of chest expansion on the left side.

I cannot too strongly impress upon you the vast importance of carefully noting even the apparently most insignificant physical signs. The very one which we will perhaps regard as the least important, may be the very one that will ultimately give us a clue to the diagnosis. Physical diagnosis is, therefore, of the greatest importance, and cannot be too carefully studied. After your student life is over and you are well on in active practice, you will find that each year will unfold new truths to you, you will learn to attach greater importance to each physical sign, and you will after all feel convinced that nature is only beginning to unfold her mysteries to you.

Note once more, therefore, these physical signs. The right side of the chest moves more freely than the left. To make sure of this we practice palpation: laying our open hands over the chest. We can in this way feel the difference of expansion even more distinctly than we can see it. Our attention is also called to a marked pulsation in the epigastric region, which strongly simulates the thrill of an aneurism. Auscultation shows us that the pulsation is stronger here than over the heart. All these signs are most deceptive, the chances that they are due to real aneurism being not more than one in fifty. In all probability it is merely an abnormal pulsation of the healthy aorta.

In such cases we have no right to conclude that the patient is suffering from aneurism unless, also, there are evidences of tumor. But why have we this pulsation? Such a pulsation is likely to occur in cases of enlarged heart, when the right ventricle, which may be either over-charged, dilated or hypertrophied, rests against the diaphragm. In pleuritic effusions this same epigastric pulsation is observed. In this case, when the patient leans forward I can hear his heart pulsate in its normal region,

but when the patient is erect the epigastric pulsation is strong and the heart over its normal region becomes almost inaudible.

This shows that while the heart is acting feebly, yet that it is not displaced to the right. The probabilities are, in this case, that this epigastric pulsation is due to an enlarged right ventricle. We will now see what percussion will develop. There is a great deal of resonance here, the liver dullness does not begin until some distance below the normal line. On the left side we find an area of impaired lung reaching from the nipple to the heart dullness. Posteriorly, there is resonance everywhere. Let us now try auscultation. We find interesting tubercular breathing over the position of the primary bronchus. Over the area of dullness there is marked bronchial breathing both in expiration and inspiration. There are a few râles.

The patient has a pleural effusion on the left side. This would be the usual conclusion also from the visible examination, but it is disproved by finding a distended right heart laying on the diaphragm. Percussion over the right side was negative; but over the left nipple an area of dullness was found, that is to say, that the lower portion of the upper lobe, and the upper portion of the lower lobe is affected. Dullness in this region is rare; what can it be? I have seen similar dullness between the outside of the pericardium and the lung, but in this case no such condition exists. Here we have partial consolidation, increased respiration and increased vocal fremitus. Percussion and auscultation have elicited also another interesting symptom, namely, an enlarged right bronchus, in fact there is a cavity in the right bronchus caused by its enlargement. Without doubt this man's trouble was at first merely bronchial. You will remember, also, that we found his liver displaced downwards. The right lung is emphysematous and its limits are increased. Since January last, the man says, that he has been steadily losing flesh and growing worse, he having taken fresh cold—in other words he became tuberculous. This is the reason why, although ill so long, he still looks comparatively well, namely, he has not been affected with tuberculosis prior to last January. I think that it is a good thing for this man that his lung trouble is where it is and not at the apex of the lung, for, for some unknown reason, the apex heals much more slowly than any other part of the lung. Let me, however, warn you against making any too favorable prognosis in cases of this kind. Emphysema is not such a bad thing for a tuberculous subject to have. It is an undoubted fact that tuberculosis does not spread so rapidly in emphysematous subjects as in others; but the presence of the emphysema is often apt to mislead us, and lead us to believe that the lung is healthy where it is really diseased. The mistake is made by the emphysema giving rise to resonance or percussion over portions of the lung where really there may be nodules or even partial consolidation. And so while the apparent physical signs of your patient may be favorable, yet extensive disease may exist and you will be surprised at the sudden way in which your patient will grow worse and finally die. It is well, therefore, always to add, in these cases, a possible 33 per cent. to the extent of the pulmonary disease. Therefore, be guarded in your prognosis.

PLEURITIC EFFUSION.

The next patient is a young man suffering from pleuritic effusion. About two months ago about 55 fluid ounces of serum were drawn off. The patient's breath smells strongly of decomposed pus. His temperature has been very eratic, a hectic fever existing most of the time. He had been discharged but came in again a short time since with new evidences of pleuritic effusion. He coughs a good deal, and spits up a large quantity of pus. This time there is an effusion on both sides of the chest, but the contents of the chest is pus, and not serum. This pus has caused a softening of the pleura and a fistula communicating with the lung has formed. This accounts for the pus in the sputa. But as the pus goes out through this fistula, the air comes in, and we therefore have a case of pyo-pneumothorax. Since the patient has been in the Hospital this time, 48 ounces of pus have been drawn from the right side. There is still a large amount of liquid in the chest, capable of producing flatness and tympani. As I move the patient about I can hear the pus splashing with a metallic splash, that only exists when there is air in the pleural cavity. While the case is undoubtedly one of pyo-pneumo-thorax, we also observe that his finger nails are bulbous, and that the flesh is livid around the matrix. As I have said before in this lecture, this condition of the finger nails is of great diagnostic value. But, while the indications in this patient point toward tuberculosis, yet no tubercle bacilli have been found in his sputa. After all, while we may have many symptoms pointing toward tuberculosis, yet, its actual

existence can be always proved by the presence of the tubercle bacillis.

The patient's left side is best let alone, but what can we do for his right side? If I felt certain about subsequent healing, I would insert a drainage tube in this side, but the condition of the left side makes me hesitate. I shall therefore wait awhile. In this case the prognosis is, of course, very unfavorable.

RHEUMATIC NEURITIS.

This woman is forty-two years old; she is married, and has three children. Until five years ago she has always been well, indeed, her general health is good, even now, and she is robustly built. She says that for the last four or five years she has been hoarse, and that she has had severe pains in the knee, and that her legs became swollen. Lately her arms have also swollen, become stiff and given her much pain. The case has been one of rheumatic peri-neuritis. You see that her elbow joints are very stiff. This patient should have daily movements of these limbs so that mobility may be restored. My movements of the arm cause the patient evident pain, and the procedure looks cruel; but in reality it is not cruel, for if this were not done the joints would increase in stiffness, and finally an atrophy of the muscle takes place, leaving the woman with a useless limb. On examining her limbs, I find on the left side of the tibia a thickened lesion. This can only be of a specific origin, and the laryngitis that she complains of, confirms this. Regarding the best treatment to be followed, we will give an ointment composed of equal parts of lanolin, nitrate of mercury, and cosmoline. Internally we will give her iodide of mercury.

THE THERAPY OF DIPHTHERIA.

BY F. LOEFFLER, M. D.,

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Gentlemen:—The number of remedies which are recommended in the treatment of diphtheria have, during the course of the last few years, become truly legion. Nitrate of silver, mercurial salts, chloride of iron, carbolic acid, chlorine, bromine and iodine, chlorate of potash, permanganate of potash, lime water, turpentine, chinolin, papaiotin, and even yeast, are among the remedies for which their several upholders have claimed superiority; and yet, in the face of all this, there is no one remedy that has merited a general acknowledgment, or found general use.

The majority of physicians have used this or that remedy with good results and have become accustomed to it. By good results I mean that their patients have recovered. Until sooner or later they come across a severe case in which their remedy fails them completely, and they then bestir themselves to find some other curative agent of greater efficacy. The cure of diphtheria still remains a problem of medicine waiting to be solved.

How comes it, we ask ourselves, that the therapy of diphtheria has not yet been placed upon a firm basis? The answer is easily given. Up to the present time an accurate knowledge of the cause of diphtheria is wanting, and, therefore, systematic, scientific and experimental tests of the various remedies recommended in the treatment of this disease are impossible. The only test we have for the value of these various remedies is a statistical one, and in no disease so much as diphtheria, are these statistics so little to be depended upon. Many conscientious physicians frequently report under the name of diphtheria, simple inflammation of the tonsils and pharynx with a slight exudation. Granted that many of the successful cases reported are of the above class, it will at once be appreciated how delusive and misleading such statistics are.

The problem before the investigator is to find the disease germ or cause. This problem has now finally been solved. The morphologically- and biologically-characteristic bacillus, I have found, is the etiological germ of diphtheria.

In this bacillus of diphtheria we have the object upon which the various remedies may be tried. "Not with human beings, but with the parasites in pure cultures should we experiment," said Koch in his address before the Tenth International Medical Congress in Berlin. So, guided by this thought, I for some time studied the actions of various chemicals on the bacillus of diphtheria, and those which I found experimentally successful have also been of great service to me in treating the disease in the human subject, and it gives me pleasure to briefly report the results to you to-day.

The chemical actions of various agents upon the bacillus of diphtheria, have been already studied by many investigators. Their methods of procedure have been varied. D'Espine and de Marignac, placed

4 cubic centigrammes of the solution they wished to test in a test tube, after previous sterilization of the solution, then a portion of a pure culture of the bacilli was added and the contents of the test tube and shaken up. Portions of this culture, thus treated, were then placed in blood serum in order to see whether the germs which had come in contact with the chemical agency were dead or not. One drop of the solution was always placed in the serum with the culture. The contact of the bacillus with the solution was longer than five minutes.

Babes has a different method. In one series of experiments he would allow the coagulated surface of blood serum to come in contact for several minutes with various chemical substances, and then inoculate the surface with diphtheria bacilli. In another series he would first inoculate the serum from a pure culture of the bacilli, and then half an hour later, would wash the surface of the serum with various antiseptic substances for the space of five minutes.

Boer and Behring chose a weakly alkaline beef bouillon, prepared with peptons and salt, and inoculated this with the bacillus. They confirmed, first, in what quantity of bouillon would one gramme of the fluid that was being tested, after the mixture had stood two days, cause a decrease of the bacilli; secondly, in what quantity of freshly inoculated bouillon, and in what quantity of bouillon which had been inoculated for 24 hours, would one gramme of the fluid to be tested cause the death of the bacilli in the culture.

The results obtained by these various investigations differ materially, on account of the varied methods employed. At the outset of my experiments, I endeavored to make them of as practical value as possible, so that the results might be directly applicable to subsequent practice.

In our fight against this microbe in nature, two points are always before us: Frst, to guard against the colonization of the bacillus, in healthy subjects on the intact mucous membranes, and in diseased individuals on the mucous membrane that has not been as yet infected. This colonization can be hindered if we bring the healthy mucous membrane into contact with some substance which will prevent the growth of the bacilli, or better still, which will kill them, as soon as it is brought into contact with them. Of course these substances cannot be of a nature calculated to injure the mucous membrane, or such that even a continued use of them could give rise to toxic or other unpleasant symptoms. Second, the clusters of developed bacilli in the superficial layers of the pseudo-membrane must be killed, so that no spreading of the infection to parts of the mucous membrane, as yet intact, can take place, and also that no living bacillus may be expelled from the patient's mouth, so that the spread of the disease in other persons may be avoided.

In experimental work the bacilli should be placed in a nutritive substance congenial to them, and in which they will increase rapidly, as is the case when they are in the human mucous membrane. The temperature of the culture should also be such as to facilitate the growth of the germs. I have found the following mixture especially favorable to the growth of the bacilli: 4 parts of beef-blood serum, one pint of neutralized bouillon, 1 per cent. of peptone, 1 per cent. of grape sugar, 0.5 per cent. of common salt, at a temperature of 37.5°C.

Ten cubic centimetres of this serum mixture is placed in a test-tube. The tube is held at an angle so as to allow a larger sur, face to the serum to be exposed to the air until it coagulates. This tube was now inoculated superficially with a fresh culture of the bacillus. In eight hours small colonies could be seen, and in twenty-four hours the whole surface of the serum was covered with a thick layer of the bacilli. Into the freshly inoculated tube, enough of the remedy to be tested was poured to cover the surface of the serum—about 10 to 15 cubic centimetres. The fluid was either immediately poured off again, or else allowed to stay in contact with the serum for ten seconds. The act of gargling can seldom be continued longer than 10 or 30 seconds, and therefore this time was chosen in order to prove the efficacy of the drugs to be employed. The pouring in and out of the fluid did not work off the bacilli.

If a blood-serum culture is allowed to remain undisturbed for several days, it will be found that a thick layer has formed over the serum. This layer corresponds with the colonies of bacilli in the superficial membranous layers in the human subject. After the remedy had been tested upon the superficial culture of the bacilli, it was also tested in cultures several days old, in a similar manner. The time allowed for contact being 20–30 seconds. After the fluid had been poured off, tests were made both from the superficial, and deep layers of the culture.

I discovered, in this way, that while some remedies cause the immediate death of the bacilli in superficial cultures, they have

comparatively little or no effect when the cultures have become thick layers, even when the contact is prolonged, and that in order to produce any effect the remedy had to be used in a concentrated form.

These comparative experiments seem to me, to be of great practical value. They teach us that a prophylactic treatment with weak solutions is not sufficient, but that we must combine these with concentrated applications which will also cause the immediate destruction of the bacilli in the deeper layers.

The remedies which I have tested comprise most of those which have found, or still find, therapeutic application in diphtheria, and also other antiseptics. Some I have subjected to a most careful study, others I have only been able to pay passing attention to.

They are as follows: Bichloride of mercury, cyanide of mercury, metallic mercury, nitrate of silver, chloride of silver dissolved in sub-sulphurate of soda, permanganate of potash, chlorate of potash, saturated lime water, aqueous chlorine solutions, aqueous bromine solutions, aqueous iodine solutions, trichloride of iodine, chlorate of lime solutions, double iodide of potash solutions, alcohol, allyl-alcohol, benzyl-alcohol, ether, chloroform, carbolic acid, salicylic acid, resorcin, hydrochinon, tropæolin, benzol, brenzcatechin, the xyloles, toluol, anisol, phenetol, pseudocumol, oil of turpentine, anilin, thymol, the creosoles, creosol-sulphonic acids, and thirty-eight etheric oils.

The majority of the organic preparations were placed at my disposal by Dr. Limpricht, of our chemical institute, and my thanks are due him.

Bichloride of mercury proved its powerful antiseptic qualities also in killing the tubercle bacillus. Solutions of 1: 10,000 caused immediate sterilization of a superficial culture, and even a solution of 1: 20,000, when brought into contact with the cultures caused the death of nearly all the bacilli, the few remaining ones, however, formed themselves into colonies within a few days. A 1: 2,000 solution, even, when kept in contact with the cultures for twenty seconds, failed to exert any lasting influence upon the deeper layers of the culture. The employment of a 1:1,000 solution caused the disappearance of nearly all the bacilli, and any stronger solution than this caused their complete extermination, even in the deepest layers.

My experiments with the cyanide of mercury were particularly interesting. This drug has been used in the treatment of diphtheria by Hugo Schulz, Erichsen, Rothe, and others. Selldén, of Sweden, has, perhaps, had the most extended experience with it. He has used it in 156 cases of diphtheria, and only lost four, three of which he came too late to relieve.

His treatment consisted in giving a spoonful of the following formula every hour, day and night:

℞

Hydrag cyan.	gramme,	0.02.
Tinct. aconiti	grammes,	2 00.
Mel. crud	"	50.00.
Ag. dest	"	150.00.

M.

For young children 0.1 to 0.4 milligrammes of thecyanide mercury was the dose employed. Then, two to four times during an hour the following gargle was employed:

℞

Hydrag cyan	grammes,	0 04
Ag. menth. pip	"	400.0

Either of these solutions have a strength of 1:10,000. My own experiences have shown that solutions of 1:10,000 exterminate nearly all the germs, although the contact may only be momentary. In solutions of 1:8,000, the sterilization is absolutely complete. The thick cultures were not, however, sterilized even by twenty seconds contact with a 1:1,000 solution, this result being obtainable only when a solution of 1:200 was used. All the same, repeated applications of a 1:1,000 solution will cause subsequent sterilization. Sèlldén's method of using the solutions every fifteen minutes or half hour, would surely hinder the growth of the bacilli. This treatment, however, will not cause a destruction of the bacilli within the membranes. In one case of diphtheria I was able to trace the bacilli in the membranes (by cultures) after the cyanide of mercury solutions had been used for three weeks.

In my opinion preparations of silver promise excellent results. Nitrate of silver in solutions of 1:1,000, when brought in contact with cultures for one to ten seconds, had a decided action. The serum would remain apparently sterile for about twenty-four hours, then, however, colonies would begin to form again. Stronger solutions of 1:150 caused complete destruction of the bacilli. The same solution had no effect upon cultures, even when kept in contact for twenty seconds.

Fresh chloride of silver, dissolved in subsulphurate of soda, was found by Behring to be very destructive to the gonococcus of gonorrhœa in solutions of 1:7,500. Personally I brought four cases of whooping cough to a

speedy termination by inhalations of a 1:10,000 solution of the chloride. Solutions stronger than 1:5,000 are very irritating. In experimenting with this drug on serum infected with the bacillus of diphtheria, I found that ten seconds contact with solutions of strengths varying from 1:600 to 1:4,000, rendered the serum sterile, while the tubes tested with solutions of 1:5,000 to 1:10,000, developed small colonies the subsequent day. But on the third or fourth day, all the tests contained bacilli. In the tube treated with the 1:600 solution, the colonies were very markedly disseminated, but in the weaker solution a coating of the bacilli had formed over the serum. Indeed this drug showed no superiority to nitrate of silver.

Permanganate of potash in a 1 per cent. solution left enough bacilli to form new colonies within the course of a day. A 2 per cent. solution sterilized the surface of the serum. In order to positively destroy cultures within twenty seconds, a 5 per cent. solution was necessary, although the 3 per cent. solution was very active.

Chlorate of potash, 5 per cent., saturated lime water, peroxide of hydrogen 1 per cent., sulphuric acid 1.25 per cent., and lactic acid 1 per cent., were entirely inactive when kept in contact for 10 seconds.

Iodine in aqueous solutions was inactive, but a solution composed of 5 parts of iodine, 10 parts of iodide of potash, and 300 parts water, sterilized cultures in 20 seconds.

Bromine in 1:300 to 1:500 solutions, sterilized the serum in 10 seconds. The bacilli in cultures were only destroyed after a 20 seconds contact with a 2.5 per cent. solution of bromine.

Chlorine water, containing 0.009 gramme of Cl. to the cubic centimeter (1: 112.7) destroyed the bacilli on the serum, even in weaker solutions (1: 1100) in 10 seconds. The first named solution also sterilized cultures in 20 seconds, but the weaker solutions had but little effect.

Although saturated lime water had been proven inactive, saturated solutions of chlorate of lime were most effective. Fifty parts of chlorate of lime were mixed with 200 parts of water. The filtrate destroyed the bacilli on the serum, even when diluted twenty-five times. The cultures, however, were only destroyed by the undiluted filtrate, in 20 seconds. Weaker solutions were almost inactive.

Behring has recently used trichloride of iodine successfully in treating diphtheria in animals, in a 1:1000 solution. Even a 1:2000 solution has a decided action. My own experiments showed that a 1 per cent. solution exterminates the bacilli in cultures in 20 seconds.

Absolute alcohol destroyed nearly all the germs on the serum surface upon momentary contact, and even a 5 per cent. solution was decidedly active. A mixture of alcohol and ether is especially valuable, and the following mixture I have proved to be most serviceable:

℞

Alcohol	50 parts.
Ether	25 parts.
Water	25 parts.

On cultures, however, both alcohol and ether gave negative results.

Allyl-alcohol gave negative results, while benzyl-alcohol sterilized the inoculated serum in 10 seconds completely. Chloroform water was equally as effectual.

Carbolic acid gave negative results in a 1 per cent. solution. A 3 per cent. or 4 per cent. solution will sterilize the inoculated serum. The addition of a 20–40 per cent. of alcohol, greatly intensified the action of a 2 per cent. solution. Cultures were destroyed in 20 seconds by a 5 per cent. solution. The same results could be accomplished by a 3 per cent. solution, with the addition of 30 per cent. of alcohol.

Lysol, which has been recently introduced into commerce, proved very efficacious. Two per cent. solutions sterilized the inoculated serum in 10 seconds. Cultures, however, were not positively sterilized, even by 20 seconds contact with a 5 per cent. solution.

The kresols were but slightly active. Salicylic acid while active in sterilizing serum inoculations, gave negative results in cultures. Two and five per cent. solutions were employed.

The action of the etherial oils was especially interesting. The majority of these strongly odorous oils contain carbo-hydrogen in the form of C^{10} H^{16} and a few contain oxygen. These actions were extremely varied. The majority of them, however, seemed to check the growth of the bacilli, even by their fumes. Anisol in a five per cent. solution of equal parts of ether and alcohol was very effective. Thymol in steam form was inactive, but in a mixture with 20 per cent. of alcohol, it killed all the bacilli upon contact—even in solutions of 1:500. The direct application of watery solutions of anilin, were active on the serum surfaces. Anisol solutions were inactive. Oil of turpentine, even with the addition of 50 per cent. of alcohol, gave negative re-

sults, but the addition of 2 per cent. of carbolic acid rendered it very active.

Metallic mercury in vapor form, was effective in sterilizing serum surfaces.

So much for my experiments, which, however, are far from being complete. Many of the most active agencies, are unfortunately unsuitable for practical use, on account of their toxic qualities.

For prophylactic treatment of persons exposed to diphtheria, gargling every two or three hours, for 5 or 10 seconds with a suitable solution, is recommended. For this purpose, I have found the following very useful: Bichloride of mercury 1 : 10,000, or 1 : 15,000, or better still, cyanide of mercury in a 1 : 8,000 solution, or 1 : 10,000. The taste of the latter preparation is less unpleasant than that of the former. Chloroform water, or thymol 1 : 500 in 20 per cent. of alcohol, are also useful and agreeable. It is of great importance that the gargling should be done properly and thoroughly. In vapor form, oil of orange peel, lemon oil, eucalyptus oil, anisol, phenetol, benzol and toluol are of service. These are best used, according to Feldbausch's method. A small metallic tube, containing absorbent cotton, moistened with the oil, is inserted in each nostril, and the patient is therefore continually breathing the fumes. These tubes should remain in place as long as the patient is in an atmosphere probably victated with the bacilli of diphtheria. The same oils might also be sprayed or vaporized in the sick room with material advantage. In this way the air would be more or less saturated with the fumes, and, certainly, an atmosphere in which orange peel oil, or lemon oil is suspended, is both pleasant and refreshing.

Regarding the treatment of patients actually suffering from this dread disease, I advocate gargling every one or two hours with weak solutions, and gargling every three or four hours with solutions which will positively destroy the bacilli, even in thick cultures. For the latter purpose I have found the following most practicable: Bichloride of mercury, 1 : 1,000; carbolic acid 3 per cent. solution in 30 per cent. of alcohol, finally equal parts of alcohol and oil of turpentine, with 2 per cent. of carbolic acid. Between the appointed hours for gargling, the parts might be painted with a 5 per cent. solution of carbolic acid, 2 per cent. of bromine, 1 per cent. of chlorine, or with a concentrated watery solution of the kresols, especially *o*-kresol and *p*-kresol.

Bichloride of mercury has been used with the most excellent effects, and also the 3 per cent. solution of carbolic acid in 30 per cent. of alcohol. Under the treatment described above the membranes can be proven to be steril within a few days. The general condition of the patient improves rapidly. Gargling with the carbolic acid solution will at first be unpleasant to the patient, but this soon passes off, and the patient soon becomes accustomed to it. It is to be noted that in diphtheritic scarlet fever the above method of treatment is also very successful.

I trust, that in this brief lecture I have been able to set forth clearly the principles of the modern therapy of diphtheria, based on the most recent researches and extensive experience, and that with the advance of medical knowledge this *bête noir* of medicine may lose many of its horrors, and be able to claim but few victims.

COMMUNICATIONS.

THE AFTER-TREATMENT OF CASES OF ABDOMINAL SECTION.

BY CHARLES P. NOBLE, M. D.,
SURGEON IN CHARGE OF KENSINGTON HOSPITAL FOR WOMEN, PHILADELPHIA.[1]

According to Oliver Wendell Holmes, to successfully treat an individual one should begin with the grandfather. The same principle applies to the successful after-treatment of cases of abdominal section. Whenever possible, careful preparatory treatment should be carried out. Nutrition should be improved, where depraved; the emunctories should be made active, especially the bowels and skin. Operation should be rapid, careful and thorough. Diseased, and especially suppurating, structures should receive most careful attention, and unless vital organs, be completely removed. Asepsis in clean operations, and irrigation and drainage in dirty operations are essentials. Under such conditions, unless operations have been made a last resort, or the vital organs of the individual are seriously crippled, proper after-treatment of cases of abdominal section will insure a successful result, quite uniformly.

That which is accomplished by after-treatment in cases of abdominal section is principally of a negative character. The object is to protect the patient from all

[1] Read by title before the Section on Obstetrics and Gynæcology of the American Medical Association, at Washington, D. C.

sources of harm, while nature does her perfect work. The most positive ends accomplished are: to sustain the power of life to enable the patient to pass a crisis; to keep the emunctories active; and to prevent wound secretions from becoming a source of poison.

The after-treatment of typical cases of abdominal section is extremely simple. By typical cases I mean those in which the operation has been done satisfactorily, without special loss of blood, and in which the patient goes to bed without marked shock.

The room in which the patient is to remain should be airy, well lighted, and ventilated. The bed, preferably, should be single, and of such a height that the woven wire matress is two feet above the floor. A hair matress is the best. The bed should be made warm during the operation by having hot water cans or bottles placed in it. These should remain about the patient until reaction is complete—care being taken to avoid burning the patient.

Diet.—During the first twenty-four hours nothing should be given. Rinsing the mouth with water will relieve thirst partly. If thirst is excessive, enemas of beef tea, eight ounces or a pint, may be given every four hours. This should relieve systemic thirst; but it will not relieve thirst due to a dry mouth or throat. On the second day one or two drachms of water every half hour may be given, to be increased or withheld according to the tolerance of the stomach. After thirty-six or forty-eight hours beef tea, one or two drachms, or an equal amount of milk and lime water or soda water, may be given; and increased if well borne, the frequency of administration being decreased. If all goes well, on the fourth or fifth day water practically *ad libitum* may be given. After a week, soft diet may be given, and after two weeks full diet.

Drainage tube, and the abdominal wound.—In my judgment the drainage tube should be used unless there is some special contra-indication. If the drainage is not excessive, nor bleeding going on, it is best to surround the tube with sterilized cotton; with the bandage over all. In this way the tube is protected against infection between dressings. A rope of bichloride-wet gauze should be passed down the tube to Douglass's pouch, and externally into the absorbent cotton. Used in this way most of the fluid poured out into the pelvis will escape by capillary action, and draining the tube will be unnecessary more than twice or three times in twenty-four hours. In this way the tube can be managed by the surgeon. All soiled cotton should be removed at each dressing, and the outside of the tube be kept aseptic by washing with sublimate solution. It is well also to keep the gauze over the wound wet with bichloride solution until the tube is removed. In draining the tube, the rope of gauze is removed, a pledget of aseptic cotton is seized with an aseptic forceps and passed down the tube. This is repeated until all fluid is removed. When the pelvis has been made dry, it is well to pass one pledget saturated with sublimate solution. The wet sublimate gauze drain is next inserted, and the cotton and bandage readjusted. This method of managing the tube has given perfect satisfaction in typical cases.

Where drainage is excessive or hæmorrhage is going on, it is better to use the rubber dam about the tube, having it project through the bandage. In this way it is more accessible for draining. The chances of infection are also greater. In this class of cases the tube must be drained often—even every fifteen or thirty minutes in case of bleeding. The piston syringe may be used to remove fluid; but I have found it unsatisfactory. It will not remove all fluid from Douglass's pouch.

The tube should be removed when the drainage ceases to saturate the gauze rope in the tube, especially if the drainage has become serous. In most cases the tube will remain in from one to three days. When the tube is removed early, the wound should be closed by tying a provisional stitch introduced during the operation. If for any reason it has been necessary to use the tube five or six days or more, it should be elevated from day to day, perhaps a shorter one substituted, and finally a plug of gauze, inserted through the abdominal wound, be used. In this way a sinus can at times be prevented. In such cases the judicious use of sublimate solution, and the peroxide of hydrogen solution within the tube track is of great value. These agents should be on cotton carried down the tube in the grasp of a forceps.

The hands of the surgeon must be made aseptic before each dressing of the tube, and the tube forceps must be kept aseptic. By having the forceps well nickel plated it can be washed before use in sublimate solution. After use it should be carefully washed with soap and water. With a little practice the surgeon can drain the tube with but little use of his fingers. Only the thumb and forefinger of the left hand need come in contact with the cotton or that part of the

tube forceps which passes down the tube. The method employed is as follows: Small rolls of absorbent cotton are wrapped in tissue paper, and sterilized in the steam sterilizer. A roll of cotton partly unwrapped is held by the nurse, the tissue paper serving to keep her finger from touching the cotton. A pledget of cotton is seized by the tube forceps, lightly wrapped about the forceps by the thumb and index finger of the left hand, and then passed down the tube. It may or may not be necessary to steady the tube. The process is repeated until the pelvis is dry. It is manifest that if special care is taken in cleaning one thumb and forefinger that asepsis can be maintained. And this can be done with little expenditure of time.

A satisfactory method of dressing the wound is to use a wet sublimate gauze dressing until the tube is removed, and then to apply a powder consisting of iodoform one part, and boric acid seven parts. The deep sutures should be removed on the seventh or eighth day; at which time the wound should be supported with adhesive straps. Some days later the superficial stitches may be taken out.

The Bladder.—It is best to encourage the patient to void urine. When necessary the catheter must be used. Every care should be taken to avoid catheter cystitis. This is best accomplished by using a glass catheter, having it carefully washed in running water after use, and kept in sublimate solution until needed again. Before the catheter is used the vestibule should be wiped dry with absorbent cotton. Then the catheter, properly lubricated with vaseline, should be introduced, the parts being exposed.

The Bowels.—The bowels should be moved early—the second or third day. I believe that the pain after abdominal section is largely intestinal—due to flatus, or to irregular peristalsis—and that the best way to relieve it, is to open the bowels. The plan of giving a brisk cathartic shortly before operation so as to secure an early evacuation of the bowels, commends itself to my judgment, though I have not employed it. On the second or third day an enema is given; and should this fail, calomel in twelfth-grain doses, every half hour, or concentrated citrate of magnesia solution. (Four ounces equals one pint of the official.) Epsom and rochelle salts have proved too nauseating for my patients.

As an enema the following is used:

℞

Magnesia sulphat	℥ ij
Ol. terebrinth	½ ℥
Glycerini	℥ ij
Aquæ, q. s. ad	℥ iv M.

This mixture is a very reliable purgative enema.

The bowels should be kept open at least on alternate days throughout the convalescence. Special care should be taken to prevent the accumulation of scabious masses.

General care, especially by the nurse.—During the first few days, or period of thirst and pain, the patient should be encouraged to bear up, and be told that pain is quite the rule after abdominal section. Nervous, fretful patients must be impressed with the fact that nothing will be given that is not thought good for them, and that personal teasing appeals will avail nothing. As a rule, a good *morale* can be thus established. The nurse can do much to promote the comfort of the patient. During the period of thirst the face and hands should be bathed frequently with ice water, or cold water and alcohol, and the mouth should be rinsed frequently with ice water or a weak solution of permanganate of potassium, or of peroxide of hydrogen. Glycerine and ice water will at times relieve "dry mouth," but generally the sweet taste of the glycerine is objectionable. The nurse should be given the rectal tube, and should use it whenever pain from flatus is present.

The bed ought to be kept strictly clean, and the sheets be kept smooth. The draw sheets and the bandages should be changed at least twice daily. The patient's back should be rubbed well with alcohol or soap liniment two or three times daily. She should be allowed to flex the legs and thighs, when the legs can be comfortably supported by placing a small pillow under the knees. Cotton-wool pads or an air cushion should be provided to ease the back. Attention to these details adds much to a patient's comfort.

I believe that it is best to keep patients on their backs for two weeks after abdominal section. During the first week comfort is best attained by avoiding all motion. After eight or ten days the use of the bed rest permits sufficient change in position. After three weeks the patient may be permitted to sit up out of bed. Hernias are best avoided by careful suturing, and by rest until firm union has occurred.

COMPLICATED CASES.

Shock.—Shock is best met by the application of external heat, the use of strychnia,

digitalis, caffeine, and whiskey hypodermically, and of decoction of coffee or beef tea by rectal enema. Within eight hours, thirty minims of the tr. of digitalis, one eighth of a grain of sulphate of strychnia, and two or three grains of the citrate of caffeine may be given. If recovery is not prompt, one-half of a grain of the sulphate of strychnia, and one drachm of tr. of digitalis may be given in twenty-four hours, and enema of beef tea, eight ounces to one pint with whisky one or two ounces may be given every two or four hours. This treatment can be continued for some days. If much blood has been lost, large amounts of fluid will be absorbed from the rectum. A saline solution, also, may be injected into the areolar tissue under the skin. After one or two days, if rectal feeding is necessary, a more nutritious mixture should be substituted. I have used the following:

One egg; milk eight ounces, peptonized; and add whiskey one or two ounces. This quantity can be given by enema every six hours. If rectal feeding is kept up for many days, it is well to wash out the rectum daily with soap suds, so as to remove decomposing material and prevent proctitis.

Vomiting.—Vomiting from ether cures itself. When vomiting continues more than two days, some other cause must be sought. If not excessive, vomiting will usually cease if no fluids are given by the mouth. A mustard plaster over the epigastrium, or a tumbler full of hot water will at times arrest it. If simple means fail, it will be found that the vomiting is due to peritonitis, or to impending obstruction of the bowels. In either case the bowels should be moved at all hazards. This is accomplished best by the use of the purgative enema already noted, given, if necessary, through the rectal tube into the colon. Broken doses of calomel can be given when other purgatives are rejected. Concentrated solution of citrate of magnesia, and Seidlitz powders also can be used. The continued use of these agents usually will open the bowels. Secondary abdominal section for the relief of obstruction should not be undertaken too quickly, as not infrequently the bowels are moved only after repeated efforts; and, moreover, the results of the secondary operation are not encouraging.

Fever.—When fever occurs the bowels should be kept freely open, and the body be sponged freely with cool water. The use of antipyretics is of doubtful value. When to re-open the abdomen for peritonitis, and when to trust to medical measures is a very difficult problem. In general, when the skin is dry, the face flushed, and the pulse full and bounding, secondary operation will be unnecessary; but when the skin is "leaky," the extremities cool, and the pulse rapid and feeble, absorption of septic material is going on and operation is indicated. Unfortunately the result usually is death.

Opium.—The use of opium in any form in typical cases of abdominal section is unnecessary. A little encouragement during the first day or two will enable the patient to stand the pain, and later it is quite bearable. Occasionally morphia is useful when a nervous patient becomes much excited, and cannot otherwise be controlled. I feel convinced that the experience of the past few years has demonstrated the fallacy of the doctrine that opium is curative in peritonitis; and that it finds its legitimate field in abdominal surgery in combating extreme nervous excitation, and in easing the last hours of the dying. Occasionally it may be used temporarily to relieve extreme pain.

Asthenia.—Asthenia must be combated by the systematic use of nutritive enemas with whiskey, together with the administration of such liquid food as the stomach will bear. Champagne can often be given with advantage where other stimulants are rejected. Less can be done by alimentation and medication after abdominal section than after other operations to combat asthenia, because, as a rule, the stomach is not available. The fate of the patient is decided, in general, when the operation is completed.

SOME POINTS IN THE SURGICAL TREATMENT FOR THE RADICAL CURE OF HERNIA.

BY AUGUSTUS P. CLARKE, A. M., M. D.,

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One of the most important features in the surgical treatment for the radical cure of hernia is the selection of the proper material for sutures. The sutures in all cases should be aseptic. The wound made by the incision should also be kept aseptic. The operator should have knowledge of the manner in which the sutures have been made, and in order to have such knowledge he should superintend their final preparation. Sutures which have been prepared and are sold in shops should in no event be trusted, notwithstanding the careful manner in which they may seem to have been prepared. No one,

except the surgeon, or his immediate assistants who are to use them, and who have taken occasion to make most careful observation, is at all likely to appreciate this necessity, and to carry out in every detail measures necessary for assuring their preparation in such a manner that they can be relied upon as being surgically clean and perfectly free from germs. Experience has demonstrated that the best material for buried sutures is that obtained solely from animal substances. Cat-gut and tendon, when properly prepared, afford the best material as is yet known for such sutures. Considerable experience is required in chromicising them. If the sutures remain long in the acid they become hard and offer too much resistance to the action of the tissues. The same effect occurs when the quantity of acid is in excess of the due proportion. If, on the contrary, the sutures are not sufficiently chromicised they undergo absorption before complete union of the coapted parts of the wound takes place. Silk ligatures, however carefully prepared, should not, as a rule, be employed in operations on hernia; their substance is not akin to those of the tissues into which they are to be inserted; they are liable to be the medium, either directly or remotely of sepsis, and are rarely, if ever, absorbed. In cases in which they have been used, it has been necessary, for the most part to establish some means of drainage. Such expedients serve to prevent the occurrence of immediate adhesion of the tissues, and to render the line of union weak and yielding, and consequently to afford but little protection against a return of the hernia. The same may be said when horsehair and certain other materials are used for such sutures. It is true that for affording immunity against the recurrence of the hernia the internal ring, may be embossed by the inverting of the sac on its peritoneal surface. This measure may, for the time being, be of some service especially in a case in which a well fitted truss is worn. Such unnatural coaptation of parts is liable, however, to yield before the superincumbent pressure of the abdominal viscera and thus to cause a return, at length, of the hernia. Application of quilled sutures fall far short of accomplishing what is most to be desired, for the adoption of this method of procedure, when silk, or like substance is employed has to be supplemented by some special provision for drainage to the wound. One of the features which I here insist upon to be achieved is that the several different tissues be coapted, each in its proper order and that direct and immediate union be secured without the necessity of having to resort to any method of drainage whatever. Another important feature to be secured in the operation is the restoration of the obliquity or the valve-like form of the inguinal canal, and also of the internal and external abdominal rings. Attention has been called to the importance of this measure, but as yet, I believe, it has not been generally appreciated. This may be effected by free dissection proceeding from the internal ring. In cases in which the tissues have undergone serious changes, or the parts have become distended, deformed, thickened or attenuated much difficulty will be encountered in accomplishing such restoration. Every effort, however, should be made to bring back the canal as near as possible to the typical one, as regards length, diameter and obliquity. In those cases in which the canal has become tortuous, or in which the opening is formed at an undue angle to the parietes of the abdomen, and the parts are not reformed but are left in abnormal condition, the operation undertaken for the radical cure will prove to be of temporary benefit only. Statistics are sometimes offered by different operators to show that certain methods of practice are attended with unusual success. Statistics can be of but little value when the individual operators select cases with the view of showing favorable results of their special methods of operating. In a case in which the sac is to be removed the cord should be freed as high as possible even if the peritoneum has to be impinged upon. The sac should be sewed off by means of aseptic animal sutures; and if the other steps in the operation have been properly taken there will be scarcely any danger of a return of the hernia. There are several advantages in the method of removing the sac. Prominent among them is the greater facility for inspecting its contents and for guarding against the possibility of reducing parts which may be in a state of inflammation. Such a condition of the parts is particularly apt to occur in cases of strangulated hernia, after prolonged taxis or other measures for relief have been undertaken. When the hernia has been properly reduced, the sac should be regarded only as an unnecessary incumbrance. The sac is formed originally from the parietal peritoneum, which frequently becomes distended and thickened. The various changes in its nutrition and vascularity often lead to irritation, inflammation and adhesion, according to circumstances and accidental

conditions. In all cases after opening the sac the surgeon should see whether the circulation returns. If the parts have been too long compressed and there is much danger of sloughing, it will be advisable to resort to resection of the necrosed portions, and not to assume risks of returning them. After opening the sac and relieving the constriction, and before making reduction, the contents of the sac should be carefully examined. If there is evidence of inflammation or an effusion of lymph, free irrigation, with mercuric bichloride should be had recourse to. The sac should then be sowed across at its neck with animal suture and be excised. Different methods of operating for the radical cure of hernia from time to time have been reported. Emphasis is often laid upon the adoption of the most careful antiseptic precautions. A more particular examination of such reports almost invariably reveals the fact that some method of drainage has been employed. The failure on the part of the operator to keep the wound aseptic, must necessarily render the line of union weak, the parts in large measure devoid of vitality, and thus incapable of overcoming the pressure which is the cause of the recurrence of the hernia. This is the reason, no doubt, why so many different methods for the radical cure of hernia have been devised, and why each method of operating, for the most part, undertaken by a different surgeon, so often proves unsatisfactory. In some cases of femoral hernia, excision of the sac is almost imperatively demanded. In those cases in which Macewen's method is adopted, the thickened mass is liable to set up more or less irritation, and to become the source of much inconvenience.

When the sac is removed the ring and canal can be narrowed and sutures can be introduced, in close proximity to the vessels without causing injury or disturbance to the circulation. Another advantage, according to Mr. Poland,[1] is that it allows the closure of the neck of the sac, and thus effectually prevents all haemorrhage from the wound into the peritoneal cavity. After the sac has been removed the loose folds in the vicinity can be more nearly approximated, the exudation of plastic lymph readily closes the wound effectually from any communication with the abdominal cavity. After the edges of the pillars have been refreshed they may be brought together and retained by aseptic sutures. By this means the canal is reformed but narrowed, and becomes an effectual barrier against the recurrence of hernia. This method is evidently of far more importance than the one which seeks to utilize the sac by invaginating it in the canal, and by converting it into a pad, or fixing it as a boss over the internal ring. Of course in cases of chronic hernia, in which there has been much inflammation, considerable difficulty will be experienced in separating the sac from the surrounding parts. If, however, much care be exercised, and a liberal use of the aseptic sutures be resorted to, the sac can be separated and be removed, to a certain extent without incurring the risks of gangrene, suppuration or inflammation, and the operation will therefore not appear so difficult or dangerous as some writers would lead us to believe. In a recent case in which the hernia is quite small, the sac and hernia may have passed into the abdomen and so have disappeared. These cases may be operated upon without our interfering with the sac. The edges of the pillars should in such cases be refreshed, and approximated by aseptic animal sutures. The other parts are sewed together according to the method already referred to. In congenital cases the cord and sac are frequently found so blended with each other that to separate the one from the other is often most difficult and tedious. In such cases, when there is no appearance of recent lymph, portions of the sac may be left. The remaining fibres for the most part, usually undergo absorption or degeneration. This measure in the operation is quite different from the one which, as said before seeks to plug the canal and internal ring, by means of the retained or inverted sac that is liable to form a painful or hardened mass in connection with the ring and canal. In operations for the cure of hernia, the use of wire sutures is unnecessary, and should not be encouraged. The use of wire sooner or later, becomes the source of inconvenience, if not of serious trouble, and notwithstanding the efforts made in other respects to keep the wound aseptic, their presence is followed by irritation or ulceration, conditions that will necessitate their early removal and thus compromise the usefulness and advantages that should be derived from the surgical measures undertaken. Other methods of treating the sac have been proposed. The cases in which the method by torsion of the sac, can, with any degree of safety, be resorted to are too few for general

[1] John Poland, F. R. C. S. Braithwaite's Ret. Part 98, page 124.

considerations. In every such case the operator of course must be law unto himself

In conclusion I would say that every operation, for the radical cure of hernia, in which the wound is kept strictly aseptic including the employment of thoroughly aseptic animal sutures the results will be most satisfactory, and but little danger is to be apprehended of a return of the hernia. These favorable results may be expected to follow in the cases in which the sac has, as far as possible, been excised, without injury to the cord or other parts. In all cases expected to be successful the operation should be so conducted that no drainage, however simple in its details, should in any way be required. The necessity of observing this principle in operations for the cure of hernia, has been urged by my friend, Dr. H. Q. Marcy. He[1] says the "Coapted surfaces held aseptically at rest, readily tolerate the limited effusion which is utilized in the process of repair. The elimination of the drainage tube, renders the complete closure of an aseptic wound possible, and prevents its further extraneous contamination. Repair ensues as in a subcutaneous wound. The advantages of this method in the treatment of the wound, is the assurance of non-infection. By every method of antiseptic dressing with drainage all surgeons have admitted the great difficulty, and, in children the well nigh impossibility of retaining the wound aseptic." The results of the operations in the hernia cases, occurring in Dr. Marcy's practice, with which I have been connected, and also in those in my own for the past twenty years fully justify the conclusion here reached. By the observance of these principles of aseptics inoperative treatment for the radical cure of hernia, Dr. Marcy has, according to my judgment, attained a success that has scarcely been paralleled.

Society Reports.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, May 29, 1891.

The President, John B. Roberts, M. D., in the Chair.

DR. FRANK WOODBURY SUBMITTED A PAPER ON NITROGEN-CONTAINING FOODS AND THEIR RELATIONS TO MORBID STATES.

In connection with the paper of the evening, by Professor Chittenden, upon the "Food-value of Beef-preparations," I have been invited by the Honorable Board of Directors to contribute a few remarks upon "Nitrogen-containing Foods and their Relations to Certain Morbid States." Under the circumstances, it is proper that what I have to say shall be made as brief as possible.

At the outset, our attention is drawn to some fundamental physiological facts which must be kept in mind during the discussion of this subject. The human body is now regarded as a unit composed of an aggregation or community of cells. These anatomical elements differ from each other in some respects, but agree in this: each cell consists of two parts, one living and one non-living, corresponding with cell-nucleus and formed material. What is visible to us is the non-living part, or the formed material; the real living part of the organism is hidden from view. Just as in vegetable tissue, the parts that are permanent and solid are composed of the cell-walls, which may remain long after the essential living part or protoplasm of the wood-cell has dried up and disappeared—in a similar way, in the human subject, the various organs and tissues which give it form and substance are not living; the only part exhibiting vital phenomena is the soft, shapeless, and colorless cell-nucleus, consisting of protoplasm or bioplasm. This living substance, in its chemical composition, resembles the various tissues, varying somewhat according to function, but it contains one essential ingredient which is so characteristic as to confer its name upon the whole class—this element is nitrogen. The celebrated dictum, "Without phosphorus, no thought," might be paraphrased "Without nitrogen, no life." Viewed from the physiological stand-point, the name "Azote," applied to this element by Lavoisier, appears remarkably inappropriate.

As a necessary constituent of the tissues, therefore, nitrogen, in a state of combination, is always present in the human body. Since it is found in considerable quantity and in various forms in the excretions, some two or three hundred grains being discharged daily by the kidneys alone besides what is lost by the intestinal tract and the skin, it is evident that in order to maintain life the supply must be kept up from outside sources. There are two principal directions in which we may look for the supply of nitrogen, (1) the atmospheric air, and (2) the food.

Although the atmospheric air contains about eighty per cent. of nitrogen, we may dismiss this at once as not available, beyond

[1] Treatise on the Radical Cure of Hernia, page 87.

a very limited extent. Experiment has shown that it is not consumed or absorbed in the act of respiration; but a certain amount of air is always swallowed with the food and passes into the stomach, where it may become absorbed by the gastro-intestinal mucous membrane. It is possible that a small quantity is introduced by this channel, especially since it has been demonstrated that a moderate amount of gaseous nitrogen is excreted or exhaled by the skin.

Nitrogen-containing food must, therefore, be regarded as practically the only source of the constant supply of nitrogen which is so essential to the maintenance of the body in a normal condition. In fact, due attention has already been given to this by Liebig, Fick, Wislicenus, Parkes, Pavy, Flint, and others; and the proper relation of the two great divisions of proximate principles of organic origin, the nitrogenized and the non-nitrogenized, have been pretty closely determined. As their results are to be found in all the text-books, I will not refer to them in detail. I may remark, however, in passing, that from the clinical standpoint there appears to be a fallacy underlying all these calculations of dietaries, where food values are expressed in grains of nitrogen and carbon, inasmuch as no allowance is made for waste; the entire quantity ingested is supposed to be digested and assimilated. In practice we know that the feces contain considerable nitrogen, which is not excretory, properly speaking, but represents the excess of consumption, part of the food having escaped digestion. In nursing infants the feces consist largely of undigested casein. Even adults are not able to entirely digest milk, and if so simple an article of food as milk is not completely assimilated, what warrant have we for assuming that the nitrogenized constituents of peas and beans, or of animal tissue, will yield their full equivalent of potential force to the organism? On the contrary, we know it to be a fact, that much food-stuff passes through the alimentary canal without having its proximate principles extracted by the digestive organs and the absorbents.

We may, however, both clinically and by physiological experiment, making due allowance for the personal equation, determine with sufficient exactness the kinds and proportion of different foods required to maintain the body in a normal condition. Proceeding on the same lines, we may discover the effects of an excess, actual or relative, of nitrogen; or, on the other hand, we may ascertain the results of deprivation either partial or complete. We may also be able to see some therapeutic applications of the knowledge thus gained.

From the time of Hippocrates, and even earlier, it has been known that health and disease are largely influenced by food, and that the effects of an animal diet are different from those of a diet exclusively of vegetables. A distinction was even made between leguminous and other forms of vegetable food. It was not until our own day, however, that the practising physician possessed sufficient knowledge of the chemistry of food and of metabolism in health and disease to enable him to direct the diet of his patients upon scientific principles. Following the definition given by Hippocrates, "Medicine consists in addition and subtraction, the addition of the things which are deficient and the subtraction of those things which are redundant; he who practises this is the best physician, but he whose practice is farthest from it is the farthest removed from a knowledge of the art"—we can now prescribe viands suited to a deficiency of nitrogen in the system, or substitute others if there is an excess. To the therapeutic aspect of the subject I will now very briefly ask your attention.

Taking up the latter instance first, we find that a diet poor in nitrogen is useful in the several forms of rheumatism, in gout and lithæmia, and also in recurring attacks of biliousness and bilious headache. Scurvy appears to be caused by an absolute, as well as a relative, excess of nitrogen in the food, and I have seen it caused by the use of an excessive amount of fresh meat among children in an orphan asylum. In its treatment, vegetable food relatively poor in nitrogen is usually employed. Some skin diseases, possibly of lithæmic character, are only to be cured by withholding nitrogenized food. It seems possible that a liberal use of meat in the diet may have some connection with the development of cancer, a disease which appears to be on the increase, as was pointed out by Dr. R. A. Cleemann, of this Society, in his "Address on Hygiene," delivered before the Medical Society of the State of Pennsylvania a few years ago. Dr. W. Mattieu Williams, in a little work on the "Chemistry of Cookery," pointedly directs attention to the large consumption of meat as a cause of various forms of cancer. In families where a hereditary tendency of this kind exists, it is possible that it might be overcome by vegetarianism. Some

nervous affections, notably epilepsy and chorea, are greatly benefited by abstention from meat in the food.

Owing to the writings of Roberts, Fothergill, and others, a causative between a diet rich in nitrogen and some forms of kidney inflammation or degeneration is now generally recognized. And in the treatment of the various forms of Bright's disease, attention to the diet is generally admitted to be of prime importance. There is a widely spread opinion that nitrogenized food is favorable to the occurrence of inflammation, and for this there seems to be a scientific foundation. Parkes has shown that a non-nitrogenized diet causes lowered blood-pressure and diminished arterial tension. Meat, therefore, is ordinarily prohibited under the antiphlogistic treatment, as it was formerly called. In acute inflammations of mucous surfaces, especially in plethoric subjects, the use of animal food is usually forbidden. This should not be applied too strictly, however, for in some cases of subacute or chronic character, a generous and nourishing diet is necessary.

On the other hand, nitrogenized food may be prescribed where there is, from any cause, a deficiency of albuminous principles in the blood, for example in anæmia or chlorosis. In phthisis, this condition is sometimes quite marked and good results have been obtained from the "beef and hot-water" plan of treatment, and also from the use of fresh bullock's blood, or hæmoglobin, which requires less digestive capacity and is more easily assimilated than muscle-tissue.

Children frequently suffer from a deficiency of nitrogen. Where an infant is reared upon condensed milk entirely, the limbs are plump but the tissues are flabby, on account of anæmia. Such children are late in getting their teeth and have little power of resistance against disease. The addition of oat-meal, barley, or rice to the milk will often bring about marked improvement and may prevent the development of rickets. Just here I might stop to point out the fallacious character of some of the arguments based upon the comparative chemical composition of woman's milk and other foods. Leeds found in a number of specimens of woman's milk that the nitrogenous constituents varied from 4.86 to 0.85 per cent. So that one specimen of mother's milk may have six times the amount of albumious material contained in another.[1] This shows the necessity when the child does not thrive at the breast, of examining the milk to find out if it be deficient in nitrogenized constituents. If so, the addition of beef-meal, bovinine or other nitrogen-containing food in an easily assimilable form is advisable.

Eczema in infants, or in sewing woman, is often traceable to a deficiency of nitrogen in the food, and Dr. Rohé, of Baltimore, advises the addition of meat-broth and eggs to the diet as an essential part of the treatment. Similarly, in many syphilitic eruptions upon the skin, in broken-down subjects, good food is a necessary preliminary to any specific treatment. Neurasthenia and atonic dyspepsia, which are so often associated in the same patient, especially if he is at the same time anæmic, can only be relieved by nitrogenized and fatty food, administered in a form easy of assimilation and at comparatively short intervals. On the other hand, in diabetes and in obesity, the diet may be largely nitrogenous, but in this case it is because there is a desire to reduce the carbo-hydrates and not because an excess of nitrogen is particularly sought after.

To return to the children, I wish to call attention to the fact that during the period of growth and development more nitrogen is needed than after the body has assumed its full stature. Hence, school-children should have a due allowance of meat, and should be encouraged to eat oat-meal, corn, beans, peas, and other vegetables known to contain this valuable constituent.

In the foregoing brief *résumé* of an important and interesting subject, I have not made any distinction between the nitrogenous, proximate principles of animal and vegetable origin. Chemically and physiologically they are nearly identical; but practically there are minor differences of palatability, digestibility, and relative utility, which, at present, our limits will not permit us to consider.

[1] Quoted by Starr in his "Hygiene of the Nursery," Philadelphia, 1888.

—Sanitary administration means not only personal comfort and health in the family, but economy to the state and family. Two hundred and fifth thousand lives lost, three million cases of sickness and $20,000,000 in money are traced, in one decade in England alone, to neglect of sanitary care. The sword and musket are terrible ministers of death, but even in armies, where battles kill one person, disease kills at least three.—*Ex.*

Special Correspondence.

London Letter.

LATE SPRING AND THE INFLUENZA—REJECTION OF THE NEW SCHEME OF THE LONDON UNIVERSITY—SIR WALTER FOSTER ON PROFESSIONAL POLITICAL POWERLESSNESS—PROFESSOR GAIRDNER'S LITTLE ANECDOTE.

Spring is late in coming this year. Hail storms have been reported all over the country, varied with snow and sleet, while every now and then a warm, genial day is dovetailed into the midst of this backward season. The cold has swelled the Registrar General's returns in no small degree. In London alone there is an increase of 433 deaths above the average number for the last ten years. The deaths from diseases of the respiratory organs were 584, or 240 in excess of the average; of these 230 were attributed to pneumonia, and 302 to bronchitis. Influenza rose to 148, or 21 in excess of the highest weekly number of deaths in the 1890 outbreak. The death rate for the Metropolis amounted to 24.0 per 1,000. In some of the provincial towns, however, the rate has been brought up to fever pitch. Sheffield, for instance, has shown the following figures for the last three weeks during the influenza epidemic: 57.8, 70.5, 59.3; Leeds, 27.9, 36.1, 48.3; Manchester, 29.8, 35.1, 43.6. A more intimate acquaintance with this mysterious disease is impressing on us the important lesson that fatalities are largely influenced by surrounding insanitary conditions. The smoky atmosphere of Sheffield, together with the dusty workshops, render its inhabitants especially liable to chest affections. The other day a member of the House of Commons solemnly warned the Commissioner of Works that by leaving the windows of the House open he was admitting the influenza. If closed windows would exclude the microbes our difficulty in dealing with those obtrusive vegetable organisms would be materially lessened, but, alas, they are not so easily given the cold shoulder.

The revolutionary spirit of the age seems to have at last invaded the domain of medical education. Two of the most conservative and autocratic of the London powers have lately received a sharp reminder that governing boards cannot for ever ignore the wishes of their constituents. The new scheme of the Senate for providing a degree on "reasonable terms" has been rejected by an overwhelming majority at the meeting of the Convocation of the University of London. The chief opposition has been raised by the provincial schools, which were barely allowed a voice in the proposed future Senate. Then the Council of the College of Surgeons sanctioned the scheme without consulting its members and fellows. At a general meeting of the College a formal censure was passed on the Council for having taken that step, and a further resolution declared it undesirable that that body should have increased power over medical education. Mr. Lawson Tait carried another motion that no amalgamation scheme would be perfect that did not include the Society of Apothecaries, which the Senate had entirely ignored. And thus there is every prospect of a lively struggle. However, there can be no doubt that the student will get his London degree in a not very distant future without being forced to seek it in the Provinces. Some of the journals do not mince matters, but say in so many words that it is the instinct of self-preservation only that has forced the hands of the London Senate. The Scotch newspapers openly acknowledge that the establishment of a teaching London University will be a great blow to their own Universities.

Notwithstanding the attempt of the London Senate and of the London teachers to ignore the Provinces, there is no question that many of our most able men are in the Provinces, although in the natural course of events a goodly number of them are drafted on the Metropolis. One of the first men to call attention to the existence of such a thing as a democracy in the medical profession was a Privincial physician, Sir Walter Foster. In 1883 he made a famous presidential speech before the Birmingham branch of the British Medical Association. In that address he pointed out the political powerlessness of the profession, and started the wave of thought that is now sweeping against various ancient barriers. Sir Walter has lately resigned his appointment as honorary physician to the Birmingham General Hospital, which he has held for upwards of twenty years. Five years since he was elected direct representative on the General Medical Council, and is a member of the House of Commons. On the occasion of his first entering on public life, he says that Sir Andrew Clark wrote him a word of warning to the effect that "Medicine is a jealous mistress," to which reminder he replied that the best antidote was unbroken loyalty. Sir Walter struck a key-note in the further remark that in all his

public work he never had, and hoped he never should lose sight of medicine, for he believed their profession was interwoven with the highest and best legislation and with the future welfare of mankind. This is very much the conclusion that is arrived at by most philosophical thinkers, and may be otherwise expressed in the formula that medicine is one of the most progressive, as it is the most comprehensive, of all professions. After waiting all these centuries, the outside world seems to be waking up to pretty much the same conclusion. Peerages, however, are as yet reserved for such men as soldiers, bankers, brewers, diplomats and successful politicians. Sir James Paget has often been mentioned as our coming peer, but Ministers have not yet made up their minds.

Professor Gairdner has revived an old story that went the round in Edinburgh many years ago, of which it can be said, *Se non e vero 'e ben trevate.* He asks whether it is better to test a harmless remedy by giving it all round, or to adopt the more scientific plan of giving it to one-half of our patients (reserving the other half as a control experiment). The story refers to the former method. "A lady, finding in her prescription something unwonted and as she thought uncanny, turned back to get a further explanation from the Professor, who was by that time fully occupied with someone else. But the man at the door was equal to the occasion. Taking the prescription into his hand he ran it over with a practised eye, inured even to Latin formulæ by long and faithful service in a medical man's house. He returned the paper to the lady and showed her to the door again with the remark," Ou aye, mem, it's a'richt; they're a'gettin' that 'the now." The Professor had been experimenting all round, more or less, with some of the more unwonted metallic salts, such as titaninm, cadmium, tellurium, palladium and so on, most of which turned out to be tonics, with the exception of one, which had the awkward peculiarity of causing the patient to shed abroad such a peculiar and disagreeable perfume or stink (if you will pardon the word) that it had to be forthwith abandoned on that account." As Dr. Gairdner remarks, the anecdote did not detract from the world-wide fame of the Professor in question, nor was it known to have emptied to any extent his over-flowing waiting-room. D. W.

Selected Formulæ.

BLENNORHAGIA.

℞

Creasote	gtt. x.
Fl. ext. of hamamelis	
Fl. Ext. of hydrastis canadensis	aa...gtt xv.
Rose Water	60.0 grammes.
Water	200.0 "

M.

—*Journal de Méd. de Paris*, May 10, 1891.

TREATMENT OF FISSURED HANDS.

After having washed the hands in tepid water, apply a small quantity of the following solution to the fissures, and let it dry:

℞

Tannin	1.0 gramme.
Glycerin	20.0 grammes.
Water	100.0 "

M.

At night, on retiring, the following salve should be applied:

℞

Ext. of ratanhia	2.0 grammes.
Lanolin	50.0 grammes.
Vanillin	0.10 gramme.
Rose oil	gtt ij.

M. et. fiat. unguentum.

Gloves should be worn at night.

—*Journal de Méd. de Paris*, May 10, 1891.

WHOOPING COUGH.

Von Genser is said to use the following prescription in the treatment of whooping cough:

℞

Carbolic acid	1½ grains.
Rectified spirit	2 drops.
Tincture of iodine	5 drops.
Tincture of belladonna	10 drops.
Peppermint water	2 ounces.
Simple syrup	1 dram.

To a child of two years a teaspoonful of this mixture may be given every two hours.

INSOMNIA.

Dr. E. C. Hooved, of Dayton, Ohio, gives an efficient preparation for use in the insomnia following alcoholic excesses, etc., which is permanent, contains no alcohol, is perfectly miscible with water and can be readily prepared by any pharmacist. His formula is as follows:

℞

Chloral hydrat	
Potass. bromid	aa 3iv.
Ex. cannabis ind	
Ex. hyoscyami	aa grs. xvj.
Chloroformi	3ij.
Aquæ (bullientis)	ad Oij.

Dissolve the cannabis in the chloroform and add the chloral. Pour the boiling water on this and then add the bromide and the hyoscyamus. When cold filter. A clear amber-colored solution results, con-

taining a dram to the ounce of the chloral and of the bromide, which is in every way as efficient as proprietary preparations like bromidia, chloro-anodyne, etc., and which has the advantage of our knowing just what is in it and how much.—*Lancet and Clinic.*

THE TREATMENT OF HICCOUGH.

The *Gazette Hebdomadaire* gives the following treatment for hiccough. The local treatment is to compress the phrenic nerve and the pneumogastric in the neck by pressure with the index finger, which will often cause immediate cessation of the spasms. The medicinal treatment consists in the administration of a coffee-spoonful of vinegar mixed with a little powdered sugar, or the following formula may be used:

℞

Subnitrate of bismuth.....45 grains.
Oxide of zinc
Valerianate of zinc } of each...1 drachm.
Powdered calumba
Powdered Opium.....½ grain.
Essence of anise, a sufficient quantity.

Mix thoroughly, and give half a teaspoonful of this powder in a wineglassful of sweetened water.

TREATMENT OF PARASITIC DYSENTERY AND OXYURUS.

C. Minerbi employs naphthalin (*Médecine Moderne*) suppositories and oily enemata, the suppositories being made as follows:

℞

Naphthalin
Butyr. cacao.....aa 3ijss.

M.

When the ulcers are seated higher up than can be reached by suppositories, the author has recourse to oily enemata:

℞

Naphthalin.....gr. lxxv.
Ol. olivarum.....3v.

M.

At the beginning of the dysentery the injections cannot be held much longer than a half-hour, on account of the tenesmus. They should be repeated three or four times every twenty-four hours at this period. Later, the patients succeed in retaining them longer and longer so as to last five or six hours, or even be absorbed. Besides this the enemata do not bring about constipation.

For oxyurus the same method has been successfully employed, children infested with this parasite being cured in less than a week. The formula employed is as follows:

℞

Naphthalin.....gr. xv-gr. vxij.
Ol. olivarum.....3x-3xv.

M.
Sig. For one injection.

For an adult the enema should be made stronger such as:

℞

Naphthalin.....gr. lxxv-3jss.
Ol. olivarum.....3xv-3xx.

M.
Sig. For one injection.

COCAINE IN ASTHMA.

C. R. D. Sylva reports a case in which very severe attacks of asthma were in a few minutes entirely relieved by the following subcutaneous injection:

℞

Cocaine hydrochlor } ....aa ¼ gr.
Morph. sulph.
Aquæ destil.....q. s. M.

—*Ind. Med. Gaz.*

ALOPECIA FOLLOWING CONTINUED FEVERS.

℞

Ext. jaborandi f.....
Tr. cantharidis..... aa 3 ss.
Glycerine .....
Olei vaselin..... aa 3 i.

M. Sig.—Apply locally with a sponge at night.

—*Barthlow in Col. and Clin. Rec.*

PRESCRIPTION FOR ECZEMA OF THE ANUS AND GENITAL ORGANS.

Lustgarten advises, in *La Semaine Médicale*, the following ointment:

℞

Oleate of cocaine .....15 to 30 grains.
Lanolin.....1 ounce and 2 drachms.
Olive oil.....2½ drachms.

Use externally.

Make an application of this ointment twice daily, and after each application powder the affected part with any absorbent powder whatever. Warm soap baths will aid in curing the disease. In pruritus ani, suppositories of cocaine can be employed with advantage.

TREATMENT OF ERYTHEMA OF THE EYELID.

Brocq, in the *Revue d' Ophthalmologie*, states that he employs the following ointment in the treatment of erythema and swelling of the eyelids:

℞

Salicylic acid..... ..... 7 grains.
Lactic acid..... 7 "
Resorcin..... ...10 "
Oxide of zinc.....30 "
Pure vaseline..... 5 drams.

Care should be taken that none of the ointment enters the eye.

In other cases the following ointment may be applied:

℞

Salicylic acid.....15 grains.
Pyrogallic acid.....30 grains.
Vaseline. .....15 drams.

This treatment is to be applied at night, and it may be alternated with that containing resorcin just given.—*L' Union Médicale.*

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Write in ink.

Write on one side of paper only.

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Make as few paragraphs as possible. Punctuate carefully. Do not abbreviate or omit words like "the" and "a," or "an."

Make communications as short as possible.

NEVER ROLL A MANUSCRIPT! Try to get an envelope or wrapper which will fit it.

When it is desired to call our attention to something in a newspaper, mark the passage boldly with a colored pencil, and write on the wrapper "Marked copy." Unless this is done, newspapers are not looked at.

The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

TRACHEOTOMY VERSUS INTUBATION.

Tracheotomy and intubation are the two recognized surgical procedures for the relief of tracheal and laryngeal obstruction. One or the other of these operations may be required to relieve the dyspnœa dependent upon membranous laryngitis or diphtheritic laryngitis, growths in the larynx or trachea, growths exterior to these organs causing pressure upon them, œdema of the mucous membrane of the larynx or trachea from inflammation, from the inhalation of irritating gases, from the swallowing of corrosive liquids or from burns or scalds, etc.

For many years, tracheotomy had been the only method employed for surgical interference in these cases. In 1880, Dr. Joseph O'Dwyer, of New York, began a series of experiments which, later on, resulted in the perfection of the operation, now known as intubation. It is certainly an ingenious plan and the contrivances for its performance reflect more than ordinary credit on the inventor and investigator.

Regarding the utility of intubation in general practice, it is the object of this paper to discuss, as well as to show the relative value of the operation as compared with that of tracheotomy.

The advocates of intubation, claim that on account of the simplicity of the operation and the avoidance of the use of the knife, it is the procedure that commends itself most highly to the profession and is the operation that will be allowed most readily by the laity.

True, the operation of intubation is a knifeless procedure, and so far as the general public are concerned, is the one they would select, if the choice were theirs. But, on the other hand, is intubation a simple surgical operation? If it is, then it certainly, in this respect, possesses a decided advantage over tracheotomy. Unfortunately such is not the case, for not only is the operation, as well as the removal and replacement of the tube very difficult procedures, but the

requisite manipulations require a degree of manual dexterity which the average physician is not apt to acquire, who is called upon to practice the operation only on rare occasions.

Furthermore, the re-introduction of the tube, which is a frequent necessity in cases of intubation, is a source of constant annoyance to the patient, occasioning all the fright of the primary operation, together with nervous and physical exhaustion of the child, induced by its alarmed condition and attending struggles. The exhaustion hereby produced, is, in diptheria, above all things, to be avoided.

Among other complications, accompanying or following the operation, may be named: 1. Loosened false membrane may become wedged in the lower end of the tube, and require its instant removal; or worse still, the membrane may be forced downward by the entering tube into the trachea, and, before it can be coughed up or the passage cleared for the patient to breath, cyanosis may develop, respirations cease and death ensues; no time being afforded for the performance of tracheotomy. 2. Owing to the presence of tenacious or ropy mucus, or from the formation of loose membrane—which the child, in its weakened condition, is not able to expectorate—the tube may require removal at any time, and in the absence of the physician and the inability of other persons to remove it, symptoms of an alarming nature may occur. 3. The liability of liquids finding their way into the air passages, and pneumonia following as a result. This is a source of great danger, which is to be kept in sight, especially as an inordinate desire for fluids exists in these cases, the result, not of actual thirst but of uncomfortable sensations caused by the presence of the tube. 4. In a certain few cases (estimated to be about one per cent.), ulceration from pressure of the tube and alterations in speech have been met with; the aphonia being partial or complete, but always amenable to treatment. 5. The danger of the tube becoming loosened during a paroxism of coughing is by no means slight. In such a case, it may become lodged in the œsophagus, or else be gotten out through the mouth, if prompt assistance be rendered. In either instance, the child is in a serious condition, especially in the absence of a medical attendant. The larynx, after such an accident, is liable to behave in one of two ways: either the swollen tissues will occlude the entrance of air, or the relaxed vocal cords will fall together and give rise to immediate severe dyspnœa.

From the above observations we are forced to admit that intubation of the larynx is by no means a simple surgical procedure, nor is it an operation devoid of dangers. These facts being accepted, our next step is to show the relative value of intubation and tracheotomy, and to prove wherein one is superior to the other.

In the operation of tracheotomy, the physician is able to see his work and to meet such complications as may arise in a cool and calm manner—for he is not working in the dark. Such is not the case when intubation is performed. There the surgeon is obliged to work unaided by sight, trusting entirely to his sense of touch.

In tracheotomy the pain is momentary and the subsequent treatment of the tube can safely be entrusted to the nurse or the child's attendant. Not only so, but the operation once performed, is finished, and the patient is not harassed by subsequent surgery. Unfortunately, intubation is not attended with these results. The presence of the tube may at any moment become a source of danger, and in the absence of the physician, even a cause of death. The operation itself is often as trying to the patient as that of tracheotomy, and the subsequent removal and reintroduction of the tube—which is of daily necessity, at least—repeats all of the suffering, be it mental or physical, of the primary procedure. Furthermore, the operation of intubation has frequently to be followed by that of tracheotomy.

Finally, in spite of the fact that tracheotomy is regarded as one of the most difficult of surgical procedures, it is our belief that any country practitioner, who possesses some

acquaintance with anatomy, and has a cool head together with some surgical experience, can perform it.

Glancing for a moment at the statistics showing the relative mortality and recoveries of the operations, we are confronted with the fact that they are largely in favor of intubation. But when we consider that intubation is frequently followed by tracheotomy, and that the latter operation is often performed when the patient is in a moribund condition, the apparent discrepancy in the results of the operations is explained.

In conclusion, we think we can draw the following deductions:

1. That in cases of equal gravity, tracheotomy is not, in itself, a cause of greater fatality than intubation.

2. That the operation of tracheotomy involves less suffering to the patient, because once performed, it is done, and the patient is not annoyed by subsequent steps, as in intubation, which operation in its repetition, involves all of the harassment of the primary procedure.

3. After a tracheotomy, the patient usually falls into a quiet slumber; such is not the case when intubation has been done. Clearly showing that the presence of the tube, inserted between the vocal cords and into the larynx, is a cause of greater and more prolonged irritation than is the case in tracheotomy, where the tube is placed lower down into the trachea.

4. Intubation involves a great risk of foreign bodies, liquids, etc., entering the trachea and setting up a pneumonia.

5. In tracheotomy, the subsequent cleansing of the inner tube, can safely be intrusted to the nurse. In intubation, the doctor alone can give the tube its needed attention.

6. The physician who is able to perform properly an operation of intubation, is just as competent to do a tracheotomy, and in the latter case, with less liability of dangerous sequelæ following.

Hydrogen peroxide made into a paste with chalk or cuttle-fish bone is an efficient agent for whitening discolored teeth.

Correspondence.

BERMUDA.

Editor of The Medical and Surgical Reporter.—

Dear Sir:—Seven hundred miles from New York lies a land quite unfamiliar to most Americans, yet having within its borders much to charm, and above all, possessing in large degree that which nature has provided to restore those giving way before our over-active life.

Bermudians assert their climate the most equable in the world, and temperature tables, high and low, largely support this claim, the record for 1889–1890, as compared with several other winter resorts, being:

	Nov.	*Dec.*	*Jan.*	*Feb.*	*Mar.*	*Apr.*
Bermuda	77--62	73--58	71--50	72--49	72--50	74--56
Los Angeles	82--43	68--40	67--34	81--35	81--40	94--42
San Diego	83--46	69--40	66--35	77--38	74--41	85--45
Jacksonville	86--30	80--35	80--40	83--44	85--27	88--47
St. Augustine	84--35	76--43	79--43	81--45	87--28	86--51

The present season has been: Nov., 79–56; Dec., 73–51; Jan., 71–48; Feb., 74–52; Mar., 72–49. As a rule, November, April and May are most agreeable. During December, January and February last, however, the weather most of the time was charming. March is the worst month, when east winds, low barometer and thermometer and frequent showers are apt to prevail. The porous soil admits of outings soon after a heavy rain. As in England, mornings often betoken a stormy day, but the clouds roll by to a beautiful afternoon. July and August for the "outside barbarian" are not to his liking; and September, with its sultry breezeless days, is most oppressive of all. May and June, as regards climatic conditions and the floral beauty of forest and field, offer special attractions; but fashion at present decrees that during March the full tide of travel shall crowd steamers, hotels and boarding-houses to discomfort. The highest pleasure in these sunny isles will never be found till this senseless fad has had its day.

These islands, once called the Isle of Devils, were discovered in 1515 by Juan Bermudez, and, though many in number, only the five largest are tenanted. Their shape is that of a shepherd's crook; their area about twenty-one miles. They form a ring of coral reefs round a lagoon, the coral structure resting on a sub-marine mountain of volcanic origin—a lonely cone rising three miles from the ocean bed. Until the placing, last summer, of the cable to Halifax, they formed the most isolated spot on the globe, save, possibly, St. Helena. The population

is 16,000, of which three-fifths are black. Hamilton, the capital and leading town, contains 2,000.

The soil is red and rich—composed of peroxide of iron, alumina, silica and earthly phosphates—and, fertilized, is largely productive. The climate being semi-tropical, vegetables and southerly fruit abound. The former comprise all known in our northern gardens, the onion, of course, leading the list. This typifies the acme point of Bermudian excellence, according to Mark Twain, who declares that the fond Bermudian father, sending his noble scion of a noble sire out to battle the world, breathes a parental blessing, and—as tending towards the highest attainable—this parting injunction: "My son, be an onion!"

The houses in Bermuda are, almost without exception, built of coral, white, and so soft that it can be cut and trimmed by saw and chisel, but promptly hardens on exposure. The roofs are thin slates of the same material. These are annually whitewashed, and, rising mid their emerald surroundings—the islands are perennially green—give a charm to the landscape that must be seen to be appreciated. Each dwelling is required by law to be provided with a tank for rain water taken from the roof, which, with the yearly whitening, insures its purity. There are wells, but the water is too blackish to drink. Last year the supply was largely increased by several artesion wells, the water of which is good.

Of fruits, bananas, oranges, lemons and the paw-paw are most abundant. The bananas are of the yellow sort—sweet—but too small to compete in northern markets with those from more southern climes. The oranges and lemons are too inferior for use. The paw-paw is essentially a local delicacy, mostly used by the natives. There are no apples or peaches. There is a cherry, but it is not toothsome. On a former visit, in January, strawberries were abundant and good. Since then their culture has largely fallen off; but it has been thought that, with selected plants, extra care and added market facilities—quicker transit and cooling rooms on the steamers—they might be made an export of no little value. So, too, might the valleys and sheltered places produce figs, pineapples and other fruit; but the Bermudian planter seems to let his ambition tend mainly to potatoes and onions.

The cedar is *the* tree of Bermuda; but the palm-tree, the palmetto and bamboo rearing their stately heads, vary forest and field. Flowers bloom the year round, roses—some of which are found only here—the most. The oleander and geranium, fullest in May and June, hedge the highways. Lilies, at best in April, fill whole fields, making a picture beautiful and unique. The varied floral adornings, and so abundant, form one of Bermuda's greatest charms.

The health of these islands is almost always good. A healthy October presages a healthful winter. There has been no epidemic since 1853, when yellow fever made havoc—sparing neither sex, state nor condition. A sort of pessimistic writer hinted last summer that enteric fever was rather rife, but it was not true. The greatest mortality is under five, and, among the blacks, largely due to neglect. Long lives, 85 to 95, are not uncommon. There are nine resident registered medical men, all graduates of American colleges except two—Dr. Eldon Harvey, M.R.C.S., L.R.C.P., England, and Ettore Sarzana, M.D., Italy, L.S.A., London. There are ten army and five naval surgeons. There is a branch of the British Medical Association, before which the writer, by invitation, had the honor of making an address on narcotic inebriety. A general board of health is composed of the governor and council—the latter, nine, leading non-professional men of the colony. There are two health officers—a post-surgeon at St. George and a local physician at Hamilton; services paid by fees. Two coroners, non-medical men, are paid in the same way. Gaol surgeons at these places get $200 per year. Quarantine regulations are careful and complete.

The insane asylum here is a large building, once intended for college purposes, and contains forty beds. The attending physician is Dr. Hinson, the senior practitioner of Bermuda—salary $1,100.

Through the effort of Dr. Harvey, a handsome hospital cottage has been erected about half a mile from Hamilton. It may prove of much value should contagious disease occur among visitors. Nine-tenths of its cost was given by Americans. Great credit is due to Dr. Harvey for this good work. A new army hospital is being constructed at Camp Prospect, the central military post, two miles from town. It will admit one hundred.

The leading death cause is tuberculosis, mainly among the blacks. Forty cases occurred year before last; 40 last year. The mortuary report for 1890 included, debility 25, enteric fever 20, heart disease 20, whooping-cough 20, diarrhœa 18, pneumonia 15, old age 14, tetanus 10, still-births 28. There is much rum drinking, but little open drunk-

enness. There were two deaths each from alcoholism in 1889 and 1890.

Births and deaths are fully recorded. The former lead, making an annual increase in population—last year 241. Death certificates are not prerequisite for burial, but must be presented within a fortnight. The illegitimate births are many—during the last decade 953, of which 909 were black. The number last year was 84, the lowest, save once, since registration was adopted, twenty-five years ago—a hopeful index of bettering morals among them. There are six drug stores—one of them at St. George, twelve miles from Hamilton. Druggists are not examined. Any one, on payment of five shillings, can set up shop.

Climate has been thought, hitherto, the leading remedial factor for invalids in Bermuda, but a new Richard has lately entered the field. A band of Kickapoo Indians (?), made up of half-breeds and others from Quackland and elsewhere, swooped on the islands — an unheard-of visitation — some weeks ago. They pitched their tent hard by the town, posted walls and waste places with pictures of the noble red man in various attitudes of samaritan ministration, "laid low" during the day, and at night, by dint of so-called music, tight-rope antics, acrobatic acts, juggling feats and other "fetching" performances, drew the dusky natives in droves, and actually depleted them of $1,500 in one week—a big amount for those no better off in the world's wares than they are. Having dearthed this field, they stole away to St. George, worked that place for all it was worth—to them—and are now at Somerset for a season, after which they purpose a parting raid on Hamilton, and then set sail for the land of wooden nutmegs, whence they came.

An event so rare as to be the only one in the annals of Bermuda, was the recent trial —on an indictment for manslaughter for the alleged killing of a patient by overdosing with opium and belladonna—of one of the two colored physicians. The facts, as brought out at the inquest and trial, were that the doctor was called to a middle-aged colored man, ill with painful bowel obstruction, and prescribed:

℞

Tincti. opii.....
" belladon.....
Spts. chloroform.....
" ammon aromat.....aa gtt.v.

to each teaspoonful, with instructions to repeat every ten minutes till relieved. This was repeated, more or less regularly, and—to shorten the story—in thirty-six hours the man was narcotized, and, in forty-eight, gathered to his fathers. The doctor, a very intelligent-looking fellow, graduate of a western medical college, frankly stated in his certificate that death was due to bowel obstruction and over-dosing with opium; but the gossips got in some fine work, a hue went up, and an indictment followed. He plead not guilty. Expert evidence for the prosecution was given. A question by a juror disclosed the fact—vital for the defence and made the most of by his counsel —that the teaspoon used held nearly double the usual amount. There was little question that the man died from narcotic poisoning, but the evidence failed to prove criminal lack of medical care. The trial lasted five days. The jury was out twenty minutes. The doctor was acquitted.

It seems to us strange more medical men do not visit Bermuda. We have noted less than a dozen, and most of these from Brooklyn. Physicians might well set their patients an example in this regard, and by so doing induce many more to spend an outing here. The fact is few realize that less than sixty hours from New York is a lovely land, an evergreen isle, where roses bloom the year round out of doors, and the high tide of rose time is December; where malaria never comes; where frost and the white mantle of winter are unknown; and where the sleep-giving, health-bringing breezes, the panoramic beauty of sea and shore, and the quiet, restful life, combine to make halcyon days.

For insomnia, Bermuda is unique to do good. It is not the place for consumptives, nor for one far advanced in any wasting disease. It is a happy land for the neuralgic, and those coming back to health from acute disease. For the weary and worn, for the tired pilgrim along any line—be it brain or brawn—it is indeed a Mecca to which he may go with high hope of getting rest and relief.

Bermuda is, too, good for those not ill. Let the busy American doctor take a fortnight off, and a ten-days sojourn in these sun-lit isles, and our word for it, if conditions favor, he will lay in a stock of happy memories for many days to come.

The writer has been presenting a series of letters from Bermuda in a Brooklyn daily. One object was to induce those who might read them to visit this favored land. He will be glad to tell any one what he knows about this charming resort, and if, in so

doing, more of his confréres shall share in the pleasures he has enjoyed, he will be content.

J. B. Mattison, M. D.

Editor of the Medical and Surgical Reporter.—

My Dear Doctor:—I have been suffering the past fall and winter with gall-stone colic, the attacks coming on every three or four weeks. I could get relief from the usual remedies such as morphine, belladonna, chloroform, etc., but what I wanted to find was a remedy to prevent the formation of the gall-stones. I was advised by my old friend Dr. Job Bell, of Tennessee, to take gum guaiac and whiskey in the following proportions: Gum guaiac ℥ii, whiskey, Oj, and take one tablespoonful in water after each meal. I commenced taking the prescription and the result is I have gone five weeks longer without having an attack than I have since my first attack about six months ago. Before taking the remedy I would have a spell of billious colic every four weeks at the furthest, but usually every three weeks. It has now been nine weeks since the last attack.

The remedy improves the appetite, keeps the bowels open, and produces a copious flow of bile each day.

Dr. Bell is very enthusiastic about the merits of this drug. He says he has treated many cases in this way and has had excellent results.

The Dr. thinks it best to give the guaiac in whiskey as whiskey is less objectionable than alcohol for obvious reasons.

I write this feeling confident it will be of great use to the profession, and a boon to those who are suffering with this fearful malady.

Very truly,

J. F. Bagwell, M. D.

Book Reviews.

A TEXT BOOK OF PRACTICAL THERAPEUTICS, WITH ESPECIAL REFERENCE TO THE APPLICATION OF REMEDIAL MEASURES TO DISEASES AND THEIR EMPLOYMENT UPON A RATIONAL BASIS. Second edition. Enlarged and revised. By Hobart Amory Hare, M. D., B. Sc. Philadelphia, Lea Brothers & Co., 1891.

The evidence of the popularity of this work is shown by the fact that the first edition was exhausted within six months of its publication. Its value as a *Practical* "Therapeutics" is demonstrated by its adoption as a text book in a number of medical schools.

The present volume consists of 658 pages, and is divided into four parts. Part one is devoted to general therapeutic considerations, such as modes of administering drugs, dosage, idiosyncrasy, absorption of drugs and their duration of action, incompatibility, etc.

Part two takes up the consideration of the drugs of the pharmacopœia (U. S.), and such other remedies as are in general use, or are entitled to notice in a work on general therapeutics. Each agent is treated in alphabetical order, separately, and is discussed first, by a brief description of the drug, followed by an account of its mode of action, its application in disease, the methods of administration, and when occasion requires, the contra-indication to its employment. In the case of the more powerful drugs, the toxicological symptoms and the treatment are given. Excellent tables are appended in some instances as a means of differential diagnosis between the actions of certain remedies and the symptoms of particular diseases, as in the article on alcohol, in which three tables are given differentiating alcoholism from opium poisoning, apoplexy, and the general paralysis of the insane. In this section (page 72), the author directs particular attention to the prevalent abuse, or rather misuse, of arsenic in the treatment of skin diseases—no distinction usually being made by the general practitioner between the *moist* and the *dry* varieties of these affections. It is only in the latter cases that the drug is indicated or does good. Arsenic is contraindicated in lesions associated with much proliferation of new cells and the exudation of serum, etc.

An important detail is not mentioned in the article on cocaine, in the description of its use in minor purgery as a local anæsthetic (p. 141). It is not alone necessary to employ a ligature in such instances, in order to control the circulation and to prevent undue absorption of the drug, but it is equally important *to allow free bleeding at the completion of the operation, but before the sutures are tied*, so that any excess of the cocaine may be washed out. The neglect of this point is a frequent cause of the untoward results, so often reported as following the employment of the drug in surgical practice to produce local anæsthesia.

In the respective articles, ergot (page 159) and eucalyptus (p. 166), notice might have been made of the therapeutic value of the first drug in the relief of eneuris, and in the second instance, of the relief afforded patients

suffering from sub-acute or chronic bronchitis, pharyngitis, etc., by the employment of the oil of eucalyptus as an inhalation.

Part third treats of remedial measures other than drugs, and also includes a valuable addition in the shape of an article on "Foods for the sick."

The fourth part consists of articles upon the treatment of diseases and symptoms; a table of doses and remedies; tables of relative weights and measures in the metric and apothecaries' systems; an index of drugs and remedial measures, and an index of diseases and remedies.

With this brief summary of Dr. Hare's book, we would close our remarks by restating a fact mentioned in the earlier part of this notice—that the work is essentially "*practical*" in every particular and, therefore, can be heartily recommended as a book for the student and general practitioner.

DIABETES: ITS CAUSES, SYMPTOMS, AND TREATMENT. By Charles W. Purdy, M. D. Philadelphia and London: F. A. Davis, 1890, pp. 184.

Among the monographs which are destined to uphold the dignity and repute of the medical profession in America, the work of Dr. Purdy must be granted a prominent position. Its excellence does not depend simply upon the practical and concise form of presentation of the subject, but as well upon the value of the original matter which is contained in the book.

The first consideration which excites the attention of the reader is the prominence accorded the features of the disease and its climatological study in the United States, the observations in these relations being based upon the personal experiences of the writer and upon data obtained from the census of 1880 of this country. From the statistics detailed Dr. Purdy concludes that there is a definite factor exerted upon the ætiology of this affection by the influence of climatic circumstances. Diabetes mellitus reaches its highest proportion in those parts of the country in which there is the lowest mean temperature, combined with a low barometric registration; on the contrary, its least proportion coincides with those portions of the country where the mean temperature is highest and the barometer is relatively high. A rare atmosphere, in Dr. Purdy's opinion, is favorable to the establishment and perpetuation of a glycosuria, in that it directly contributes to a lowered possibility of oxidation. On the contrary, the marked barometric pressure induced by dampness of the air is not without some deleterious influence, the conditions of excellence demanding a warm or moderate climate with high barometric registration and dry air. In the United States the highest mortality from diabetes is reached in the north-eastern hills and plateaus, especially in the state of Vermont, in which region the mean temperature is from 35° to 45° F. and the mean elevation 1500 feet; the lowest mortality is shown to be found (and from these studies this region is regarded as the most favorable climate possessed by the United States) in the South Atlantic coast, the southern interior plateau and the south-west central region. This range embraces, in part or in whole, the states of North Carolina, South Carolina, Georgia, Alabama, Mississippi, Louisiana, Arkansas and Texas. This region, in Dr. Purdy's view, furnishes, not only climatologically but also in the constant supply of foods suitable for the diabetic, the most striking advantages for the treatment of the disease to be found in any part of the inhabited globe.

The author looks upon diabetes mellitus as essentially a disturbance of the glycogenic function of the liver, by which there occurs an arrest of the transformation of certain forms of the food (the ultimate transformation being probably into fats) whereby these substances, because of their non-assimilability, are thrown out of the body in an intermediate form, sugar. In this hepatic disturbance there occurs a hyperæmic condition of the liver and a more or less engorged condition of the chylo-poietic viscera. Recently ascertained facts point also to an influence exerted by disturbance of the pancreatic function, in connection, however, with the hepatic disturbance; further, pathological states of certain portions of the central nervous system which preside over the hepatic vascular area may induce phenomenon of glycosuria.

Among the causes of the disease the author places heredity in a prominent position. Among the instances narrated under this head it is interesting to note, in view of the recent query of Schmitz as to the possibly infectious nature of this disease, the occurrence of diabetes in the father and the mother of one of the writer's cases. Richard Schmitz in the past year has discussed the possible transmission of diabetes mellitus from husband to wife or *vice versa*, and has pointed out the not infrequent occurrence of such instances. Besides heredity, as causative influences the author mentions the greater frequency of the disease in the male

sex, in the middle portions of life, the influence of over-eating, climate, various diseased conditions, and mental emotions.

In treating of the symptoms of the affection, the various phenomena are taken up as presented by the different systems of the body. Dr. Purdy calls attention to a very valuable modification of Fehling's reagent for the detection of urinary sugar by which he is enabled to keep the cupric sulphate solution indefinitely without change, and which consists briefly in the substitution of potassic or ammonium hydrate for the bitartrate in Fehling's solution and the addition of glycerine to the solution.

The work is particularly complete in the treatment of the disease. Dr. Purdy condemns all the common diabetic breads and relies upon ordinary home-made wheaten bread, preferring to diminish its quantity rather than to replace it by an unlimited amount of an article which may, and in most cases probably does contain a greater proportion of starch than the patient's usual home diet. He refuses his patients such beverages as tea and coffee, finding from experience that they contain a notable amount of sugar; and permits only the following list of drinks—water (including all mineral waters) Rhine wine, California Rislings and Chablis, New York and Ohio Catawbas, Rudai Imperial, Schreiber's "diatetic wine," whisky and gin. Of medicinal agents, arsenic, jambul, iodoform, ergot, the alkalies and opium are regarded favorably; antipyrin with others of its class is severly condemned.

Following the general consideration of the disease there occurs a section of clinical cases, detailed for the purpose of illustration of the statements made in the previous portions of the book. Finally, there is a chapter upon diabetes insipidus, which is more briefly considered and serves as a background for the more important disease, to the literature of which the author has in this work contributed a really valuable addition.

TREATMENT OF ERYSIPELAS.

Dr. Koch treated numerous cases of erysipelas with the following ointment:

℞

Creolin	3 i.
Iodoform	3 iii.
Lanolin	3 i.

This ointment is spread as an even, smooth layer over the affected skin and its surroundings, on an area of at least two to three inches to the outside of the inflamed parts. The whole is covered by a piece of mackintosh.

PERISCOPE.

THERAPEUTICS.

ARSENITE OF COPPER IN DIARRHŒA.

Dr. F. Hinz, in the *Journal de Méd. de Paris*, May 3, 1891, strongly advocates the use of arsenite of copper in diarrhœa. He prescribes the drug in the following formula:

℞

Arsenite of copper	gramme 0.05.
Water	grammes 90.0.

M. et sig. Half a teaspoonful every hour.

During the next day the remedy is only given four times. Recovery is usually rapid.

[We strongly suspect that Dr. Hinz has taken his idea from Dr. John Aulde, of Philadelphia, the latter gentleman having used the drug similarly for some time and having written extensively on the subject. Ed. Reporter.]

ACETANILID IN THE TREATMENT OF HARD AND SOFT ULCERATING CHANCRES.

Basilvitch, in the *Journal de Méd. de Paris*, May 10, 1891, reports three cases of ulcerating chancres—one hard, in a female, and two soft, in males—that he successfully treated with local applications of acetanilid. Healing was both rapid and complete. The drug's action was equally as good, if not better, than that of iodoform in similar cases. It possesses, also, two material advantages over iodoform, first, it is inodorous, second, it is comparatively cheap.

THE ANALGESIC ACTION OF ELECTRIC LIGHT.

Dr. Th. V. Stein, of Moskan reports in the *Deutsche Medicinal Zeitung*, April 6, 1891, fourteen cases illustrating the analgesic action of electric light. The results obtained are claimed to have been remakable. The electric light was applied by an especially devised reflector, designed by the author. In cases where the pain was located in the head or neck, these parts were illuminated for only 10 or 15 seconds, but other parts of the body were subjected to an illumination lasting five minutes or over, or until the patient complained of the intense heat. In a stubborn case of intercostal neuralgia in a woman one treatment resulted in a complete and lasting cure. The same results were observed in a case of lumbago, one of severe cough, one of rheumatism, etc.

THE TREATMENT OF PNEUMONIA.

Dr. W. Soltan Fenwick gives in the *Lancet* for January 31 and February 7, 1891, an analysis of a thousand cases of acute primary lobar pneumonia which were treated at the London Hospital between the years 1880 and 1890. Those cases in which the temperature ranged above 103° are for convenience classified as "sthenic," those in which the temperature remained below 103° are considered as "asthenic" in character. The treatment of the sthenic cases was of three kinds: 1. Expectant, consisting of the application of hot poultices to the chest and the internal use of expectorant and tonic remedies. Of the 493 cases in this class, 116 were fatal, or 23 per cent. 2. With quinine, consisting entirely of the use of quinine in large doses, 12 to 40 grains a day. Of 52 cases, 11 died, or 21 per cent. 3. Antipyretic. These cases were combated upon general antipyretic principles, similar to those employed in the treatment of other acute specific fevers. Only 10 cases were treated with antipyrine and phenacetin, hence the inquiry is confined to the results which attended the systematic efforts to control the symptom of fever by direct abstraction of heat. The various measures resorted to were the use of—

1. The ice bag. Of 26 patients so treated, 4 died, or 15 per cent.
2. The cold pack. Of 26 patients, 4 died, or 15 per cent.
3. Cold sponging. Of 65 patients, 8 died, or 12 per cent.
4. The ice-cradle. Of 43 patients, 3 died, or 7 per cent.

There were 285 cases of asthenic pneumonia. Of these, 240 were treated in the ordinary way with poultices, stimulants, and tonics; the deaths were 76, or 32 per cent. In 45 cases the treatment was supplemented by large doses of quinine; the mortality was 20 per cent.

In summing up the foregoing results, Dr. Fenwick observes that the termination in the fatal cases was almost invariably directly due to failure of the heart. There are two factors which are capable of producing the condition of cardiac insufficiency—an increased resistance to the propulsive action of the heart, and a progressive deterioration of its muscular substance. In acute pneumonia both these factors are present; the former in the increase of tension in the pulmonary circuit consequent on the consolidation of a portion of the lung, and the latter as a direct result of high temperature. The action of these two forces is to compel the heart to beat more forcibly and more quickly, while at the same time it is steadily deprived of the power to do either. Treatment should therefore be directed to one special object—viz., to economize cardiac force by minimizing the injurious influences of fever. He believes that this is the best accomplished in the sthenic cases by the use of cold sponging or the ice-cradle.

In pneumonia of the asthenic type cold should not be employed, but the treatment should be stimulating.

Dr. Fenwick adds, in conclusion, that the quantity of albumin in the urine during the first three days is of considerable prognostic value; of patients with a quarter albumin, 32 per cent. died; of those with a third, 52 per cent. died; and of those with a half, 82 per cent. died.—*N. Y. Med. Jour.*

METHYL-BLUE AS AN ANÆSTHETIC.

Pietrowski has verified the statement of Ehrlich that methyl-blue is possessed of anæsthetic power to a remarkable extent. He has administered it both by way of hypodermic injections and by the mouth, to ten cases, including patients suffering from acute rheumatism and neuralgia of the intercostal, supra-orbital and sciatic nerves, as well as from lumbago. In all of these cases the urine became first green and then blue. After these injections there was some redness and tumefaction and perhaps some pain. In every case the pain was diminished.—*Revue Internationale de Bibliographie.*

STRYCHNINE IN THE TREATMENT OF CHRONIC ALCOHOLISM.

Dr. V. N. Ergolski reports in *Vratch* for March 7, 1891, ten cases of chronic alcoholism treated with more or less marked success by means of strychnine. The following are two of the cases reported in this article: The first was that of a gardener, thirty-four years of age, who often drank to excess, but did not regard himself as intemperate, claiming that he drank only when he had plenty of money and was in good company. At the solicitation of his mother, however, he submitted himself to treatment. On the first day he received a hypodermic injection of $\frac{1}{60}$ grain of nitrate of strychnine, $\frac{1}{30}$ grain on the next day, and $\frac{1}{20}$ on the third and following days. During the entire course of treatment, and for two weeks afterward, the patient did not drink anything, giving as his excuse that he had no money; but his mother said that he had never gone for so long a time without liquor in twelve years. Finally he thought he would try once more how vodka tasted. But after taking two glasses he became very drunk,

had a violent headache, vomited profusely, and had to be taken home and put to bed. He tried the experiment again in a week or two, with the same result. He insisted, however, on resuming his old habits, saying that he did not want to lose his taste for drink, and began taking vodka, a few drops at a time, gradually increasing the dose until he could take his usual allowance without trouble. The second case was that of a railroad worker, who had been for ten years strongly addicted to brandy, so that every day he would take from a half to one bottle or more, feeling, unless he took this allowance, a great restlessness and a sense of drawing in the region of the stomach. He was anxious to overcome his habit, but had not the will-power to do so. The first day after coming under treatment he received a hypodermic injection of $\frac{1}{10}$ grain of nitrate of strychnine. Upon presenting himself the next day, he reported that he had had none of the restlessness or dragging at the stomach, although he had not touched a drop of vodka. Dr. Ergolski administered $\frac{1}{10}$ grain subcutaneously this and the seven following days, after which he dismissed the patient, giving him 1 grain of the remedy divided into sixty pills, of which he was instructed to take one a day every alternate week. On the fifth day of treatment the man attended the name-day festival of a relative, where he was pressed to join the others in drinking the health of the host. He felt, however, a loathing for liquor, and would not touch it although the company made sport of him for refusing. The patient reported to Dr. Ergolski at the end of fifteen months, at which time he was perfectly cured. The eight other cases were similar to these, in all of which there was some good effects noted—in some a permanent cure, though in a few there was a relapse from one cause or another. The author regards the remedy in the nature of a specific for chronic alcoholism, and declares, as his belief, that it is possible to cure even the most obstinate cases by means of it, although in cases of relapse it may be necessary to repeat the course of treatment once or twice.—*Med. Rec.*

MEDICINE.

A CARCINOMA DISAPPEARS WITH THE DEVELOPMENT OF PHTHISIS.

As yet we know little of the analogy of various diseases, except as the history of some interesting case affords us some evidence and furnishes us with material for speculation.

Dr. Sigg, of Andelfingen, Switzerland, has recently reported the following interesting case, which is quoted in the *Wiener Medicinishe Presse*, May, 10, 1891. The patient was a woman 33 years old, who had a painful swelling of the left breast. The growth was hard, nodulated, partly adherent to the skin, and painful on pressure; the axillary glands in the left side were swollen and hard. In August of 1883, the growth was removed, and axilla cleaned out. In November of the same year a new growth appeared, below the cicatrix of the old growth, which rapidly increased in size, necessitating the removal of the remaining portions of the mammary gland. This was done February 28, 1884. On August 31, 1884, a third operation was rendered necessary, owing to the appearance of new growths. In January 1885, several new nodules made their appearance, and in April of the same year, had increased so rapidly, that the left side, from the sternum to the scapula, and into the axilla, was infiltrated, and covered with a flat growth, which rendered every movement of the shoulder, or elbow, impossible. Over the region of the left breast there were also several nodules, some as large as a man's fist. At this time the patient developed a cough, and gradually the typical picture of pulmonary phthisis presented itself. Bacilli were found in the sputum. With the appearance of the cachectic stage, the carcinomatous infiltration began quickly to disappear, and within a few days before the patient's death, no sign of the carinoma remained, except a small growth the size of a nut. A microscopical examination proved this to be an epithelical-carcinoma.

INFECTIOUS EYE-LOTIONS.

Dr. Franke, at a recent meeting of the Medical Society of Hamburg, called attention to the fact, that the instillation of solutions of atropin, eserin, and cocaine into the eye, frequently gives rise to acute conjunctivitis. The reason of this is, he claims, that these solutions are not antiseptic, and generally contain mould or fungi. Franke has found that if these remedies are added in the desired proportion to a 1 : 10,000 solution of bichloride of mercury, they will be kept antiseptic for an indefinite period, and not give rise to any irritative symptoms. In practice the addition of 2 drops of a 1 per cent. solution of bichloride of mercury to 10 grammes of any ordinary eye-lotion, will have the desired effect.—*Deutsche Med.-Zeitung*, May 4, 1891.

SOME NOTES ON THE PRESENT EPIDEMIC OF INFLUENZA.

Dr. Allen Greenwood states that the following observations are taken from his notes of a number of cases, and from his own unpleasant acquaintance with "Grip" in Waltham.

The attack usually begins with a feeling of depression, followed by dull pains, often becoming severe in the limbs and back, and often with chilly sensations. In almost every case these symptoms have been followed in twenty-four hours by a severe headache and a feeling of soreness in the throat, with painful deglutition. The inflammatory process soon extends to the larynx, and the patient becomes hoarse or loses the voice entirely; and it is here that the most painful part of the attack (to myself and several others) has been, for the pain about the region of the larynx has been intense, resembling the pain of a bad toothache or earache.

In about twenty-four hours after the beginning of the throat symptoms, the patient begins to cough, and soon there comes a feeling of tightness and soreness about the chest, the feeling of tightness often amounting to a suffocative sensation that is very distressing. The cough is accompanied by a varying amount of expectoration of a white or yellowish-white frothy material, which is occasionally streaked with blood. The expectoration becomes much less on the second or third day after the cough begins, and the dry cough remaining may last a week or more.

There is often more or less coryza, and there was in most of the cases a symptom I had never seen before, namely, a severe, dull pain over the frontal sinuses, probably due to a congestion of the membrane lining the sinuses. In my own case this pain lasted several days, and was accompanied by a marked swelling and tenderness of the integument over the sinuses.

The evening temperature when first taken, usually after the throat symptoms were well established, varied between 100° and 103° F. It remained about the same for twenty-four or forty-eight hours, with morning remissions of one or two degrees, and then fell by lysis reaching normal on the fifth or sixth day. Two of the cases were followed by acute otitis media, requiring paracentesis and the usual after-treatment for such cases.

The attack usually leaves the patient very weak, and it is often several weeks before full health is regained.

Physical examination of the chest did not show much beyond the few usual signs of a acute bronchitis of the larger tubes. In examining the throat I was struck by the absence of any follicular deposits, the appearances being invariably those of acute inflammation of the tonsils and pharynx, the surface of the whole region posterior to the anterior pillars of the fauces looking like raw beef.

In speaking of treatment, I shall only mention those things which in my few cases have given the most relief.

In no case has treatment been begun on the first day; but for the severe headache of the second day antipyrine, in fifteen-grain doses, has served me well, and given much relief to patients.

For the sore throat and painful laryngitis, hot, moist applications are indicated, either in form of poultices or cloths rung out of hot water; and the relief thus afforded, as I can testify, is very grateful.

For the feeling of soreness and tightness in the chest, nothing gave so much relief as a clear mustard paste to the front of the chest, left on fifteen or twenty minutes till the skin was well reddened.

At night the patient should take ten grains of Dover's powder, which will probably ensure a good night's rest; and this may be repeated the following night.

As the expectoration ceases, the cough becomes useless and distressing to the patient, and to relieve this one of the anodyne cough mixtures may be given. I have had very good success with a combination of morphine and hydrocyanic acid, as in the following:

℞

Morph. sulph.	gr. ii.
Ac. hydrocyan. dil.	♏ i.
Syr. tolu	ʒ ii.
Syr. simp. ad	ʒ iv. M.

Sig. Teaspoonful every three hours, for cough.

This will usually stop or relieve the cough so that it need not be taken more than two or three times a day after the first few doses. One patient did not follow directions, but continued the medicine after the cough had stopped until such marked physiological effects of the hydrocyanic acid appeared as to frighten her.

For the painful congestion in the frontal sinuses, clothes rung out in hot water and laid on the forehead gave relief, as did also antipyrine used in fifteen-grain doses.

From other physicians here I learned that the type of the disease as given above is similar to that observed by them.—*Boston Med. and Surg. Jour.*

In Tokiyo over 12,000 bodies were incinerated last year at a cost of $19,000.

SURGERY.

SOME PRACTICAL POINTS IN ABDOMINAL SURGERY.

Dr. Jno. H. McIntyre, in a paper read before the State Medical Association of Missouri, states that in his opinion, among anæsthetics, the safest and best is bichloride of methylene used in Junker's Inhaler. He has used it in laparotomy work for the past ten years without a single untoward sympton, and with the greatest satisfaction, and upon many occasions has put it to as severe a test as it is possible to put an anæsthetic.

By its use, anæsthesia can not only be promptly induced, but safely maintained for any desirable length of time, and it is rarely followed by nausea and vomiting.

By the use of the inhaler of Junker, overdosing is next to impossible, in reality the patient takes inspired air, charged with the vapor of bichloride of methylene, and it is surprising what a small quantity is required in doing a prolonged operation.

Short incisions constitute another point of excellence, and should never be extended beyond the point of necessity in removing a growth of given size without bruising the tissues. In removing the ovaries or fallopian tubes, or both, it is rarely that the ventral incision need be over two inches in extent.

In dealing with adhesions, perseverance by well directed effort will always succeed; remembering, however, that violence is always harmful, and the necessary force should be that of gentle momentum.

Intestinal adhesions, should be separated as far from the gut as possile, for by so doing the danger of hæmorrhage is much lessened; they should be carefully examined afterward, as the placing of a Lembert suture in the proper place at the opportune moment, will prevent the mortification of a future fecal fistula.

In the management of the pedicle he always uses Japanese cable silk, transfixing the tying the ordinary surgical knot, when dealing with large tumors; for removal of the appendages, he is partial to the Staffordshire Knot of Tait.

Drainage.—"When in doubt" he always drains, and prefers the Keith tube to all others, and he is a thorough believer in flushing the abdomen with a large quantity of hot distilled water; it is marvelous sometimes to see how many blood clots can thus be washed out, even after careful sponging, besides it is one of the best methods of relieving shock.

Closure of ventral wound can best be done with silk worm gut; it is the ideal suture, as it is round, smooth and very strong, and can be rendered perfectly aseptic. As it is rather stiff, it should be steeped for a few hours before using, in a solution of some kind, so that it can be tied tightly. It should be threaded at each end upon straight or slightly curved veterinary needles. The needle being held in the grasp of the Spencer-Wells needle holder, should be passed from within outward, always including the peritoneum. Sutures should be placed five or six to the inch. The frequent cause of ventral hernia following abdominal section, is an insufficient number of sutures.

After Management.—For the first twenty-four hours, nothing should be taken into the stomach, except a little hot water, bits of ice chewed or swallowed do not relieve thirst. The second day a little barley water may be allowed, and on the third day she can be promoted to a chicken wing, when afterwards, if everything goes well, almost any light diet may be allowed.

When pain is present, he uses but little morphia, on account of its tendency to arrest secretions; and thereby prevent the elimination of morbid material, but in its stead, for more than a year past, has used antikamnia, with happy effect. It soothes and tranquilizes, and lessens the tendency to rise of temperature.

Stitch-hole sinuses can best be obviated by early removal of the sutures. It is rarely that he allows sutures to remain in the ventral wound longer than the eighth day, and he often removes them as early as the sixth.

He who essays to do abdominal and pelvic operations, should by previous observation and training, be so fitted for his work, that when he comes into "action" he will be "ready for anything, and surprised at nothing."

The best place in which to obtain the highest grade of success, he thinks, is not in large general hospitals, neither is it in "the cottage by the wayside," but in a small especially prepared establishment, under the absolute control of experienced management.

EXCISION OF PORTIONS OF THE LUNGS OF DOGS.

In view of the universal interest excited in relation to tuberculosis in all its now recognized manifestations by the announcement that Koch's tuberculin acted upon tuberculous tissue, causing its death *in situ*, but not rendering the necrotic tissue innocuous, it occurred to the members of the Stillé

Medical Society to undertake the following research, which was performed by Bolgiano, Patek and Sailer in the Physiological Laboratory of the University of Pennsylvania:

A certain number of dogs were set aside for experimental research. The general plan of operation first adopted was to resect one or more ribs, draw out and ligate a lobe of the lung, cut off a portion and return the lung into the cavity. A catgut drain was then introduced into the thoracic cavity, and the pleura, intercostal muscles and skin was sutured. Of four animals experimented upon one died upon the table, two on the second day after the operation, and one not until the fifth day. Autopsies showed gangrene of the stump and empyema.

A different operative technique was then adopted. The sight of operation, previously selected in accordance with results obtained on the cadaver under forced respirations, was shaved and carefully disinfected. An incision about two inches long was made down to the intercostal muscles, and the tissues were dissected back a short distance on each side. A quick cut, about one and a half inches long, was then made through the intercostal muscles and pleura. Retractors were immediately inserted, and the ribs were drawn apart by an assistant, while the operator thrust in a pair of hæmostatic forceps in the direction previously determined, seized the lobe of the lung, drew it out and transfixed it with a sharp probe. As soon as this was accomplished the retractors were withdrawn, allowing the ribs to close upon the lung tissue, the probe preventing retraction during inspiration. The external portion of the lung was now removed by a V-incision. A needle, threaded with antiseptic gut, was passed through the intercostal muscle, pleura and tissue of the lung beneath the incision, and out through the pleura and intercostal muscle of the other side. These sutures were repeated about one-eighth of an inch apart until the wound in the thorax was closed, the wound in the lung being closed at the same time. A catgut drain was now laid over the wound, and the edges of the skin were brought together. Owing to the difficulty experienced in controlling the dogs, it was found necessary to dress the wound with a solution of collodion and iodoform in ether upon a matrix of cotton.

By this method three dogs were operated upon with most satisfactory results. During the operation shock was not experienced, and but little hæmorrhage occurred. In each case the dogs reacted well. Respirations were at first somewhat rapid, and there was an insignificant rise of temperature during the twenty-four hours following the operation. The appetite was good throughout.

One dog was killed and examined on the tenth day after the operation, the trachea being ligated previous to the opening of the thorax to prevent collapse of the lungs. The lung was found to have healed perfectly to the thoracic wall without the occurrence of circumjacent pleurisy. The pneumothorax had been wholly absorbed and the function of the lung restored.

Three weeks after operation the second dog was killed and the thorax opened under forced respiration. The wound in the lung had healed completely, leaving a small white cicatrix, and the lung itself had become detached from the thoracic wall. The pneumothorax had been wholly absorbed and the function of the lung completely restored. Indeed, the result may be looked upon as a perfect cure. In both instances about 0.5 gram of lung tissue was removed from the lower lobe of the right lung.

From the third dog the whole of the upper lobe of the left lung was removed—a piece about three inches long, and weighing 5 grams. It was necessary in this case to ligate the bronchial artery, but the operation was performed without further complications. The dog recovered promptly and is now living in excellent condition.

We think that we may fairly consider these results as indicating a thoroughly satisfactory method of excising portions of the lung from dogs. Whether it is equally applicable to human beings, experience alone can demonstrate. Reasoning *a priori* it would seem that this technique might be adopted in surgery, for none of the steps depend upon any anatomical peculiarity of the subject. What result it promises it is, of course, impossible to say, but the beneficial results of operative interference in tubercular peritonitis strongly indicate that much good may come from surgical interference even when such important viscera as the lungs are involved.—*Univ. Med. Mag.*

GYNÆCOLOGY.

SALICYLATE OF SODA AS AN EMMENAGOGUE.

Dr. C. Mettenheimer speaks highly of salicylate of soda as an emmenagogue. He bases his opinion on a series of cases, one of

which is reported in the *Allgemeine Med. Central-Zeitung*, May 6, 1891.

The patient was a married woman, 35 years of age, and of vigorous constitution. During the prevalency of the grippe she caught cold, and complained of chills, pains in the limbs, headache, loss of appetite, pain in the eye-balls and great lassitude. The symptoms were not severe, and the febrile symptoms were very slight. The following prescription was given:

℞ Natron. salicyl..... 6.0 grammes.
Aq. dest ....75.0 grammes.
Syr. aurant. cort.....25.0 grammes.

M et Sig. One tablespoonful every hour until perspiration occurs.

After the patient had taken two doses she began to perspire, and also her monthly period appeared, which had been delayed for over a week. Otherwise she had always been most regular. The menses followed their normal course, and the patient made a speedy recovery.

ICHTHIOL IN DISEASES OF THE GENITALIA OF FEMALES.

Dr. Richard Bloch, in the *Journal de Med. de Paris*, May 10, 1891, speaks most highly of the value of ichthiol in the treatment of various inflammatory diseases of the female genitalia. He considers it far superior to nitrate of silver, creolin or carbolic acid. Dr. Bloch bases his conclusions on a long list of cases in which the drug has proved itself of signal service. It seems to have a specific action in diseases of genital mucous membranes, but produces no local or general reaction, and is not in the least toxic. Intrauterine injections of a 10 per cent. solution of ichthiol in glycerine are of great value and produce no untoward symptoms.

The application of pure ichthiol to the vaginal mucous membrane produces slight erosions, and therefore occasion some pain.

The drug diminishes both vaginal and uterine discharges. In acute inflammations, whether blennorrhagic or not, it is most efficacious. In metritis of the cervix it is most valuable, and in cervical erosions the application of the pure drug will cause prompt healing.

TACHYCARDIA AT THE MENOPAUSE.

It is not many weeks ago that the subject of rapid pulse received attention in our columns, but of the numerous authors cited, none had studied the phenomenon in connection with the climacteric. This study has occupied the attention of Professor Kisch, of the Prague faculty, a resident of Marienbad, and he has made it the basis of an able article in a recent number of the *Prager Medicinische Wochenschrift*. Marienbad is a well-known resort for women approaching the change of life, and the author has had ample opportunities for studying the varied and complex nervous and circulatory disturbances of that period. As his conception of tachycardia differs somewhat from that of other reliable observers, it may be well to give his definition of it. He defines it as a purely nervous affection, not dependent upon any organic disease of the heart and blood-vessels, manifesting itself in a change of the motor fuction of the heart, and making itself evident in a decided, at times extraordinary, increase of the frequency of the heart's contractions. Although the various morbid phenomena attendant upon the change of life have received apple attention, this functional affection of the heart has gone almost unnoticed. Stokes, however, in his well-known work on *Diseases of the Heart*, mentions a form of palpitation at the menopause that is at times attended with paroxysmal attacks of great rapidity of the pulse.

Kisch's clinical picture of the affection is as follows: At the time of the menopause, occasionally after the cessation of the menses, but most frequently between the ages of forty and fifty years, when the menstrual flow is beginning to show signs of change, paroxysmal attacks of palpitation may occur in women whose heart's action has previously been quite normal. These attacks sometimes come on without any provocation, and at other times they are evoked by slight causes, such as would have no effect in a normal state of health. The attacks may come on while the patient is in any posture—walking, sitting, or lying down, and even during sleep. The subjective symptoms accompanying the attacks are a feeling of oppression and of anxiety, throbbing in the carotids and in the abdominal aorta, severe headache, and fugitive sensations of heat and of a rush of blood to the head. Occasionally there are noises in the ears, flashes of light before the eyes, and dizziness, and, in rare cases, syncope may occur. Objectively, it is found that the pulse numbers from 120 to 150, and may even reach 200. In most cases it is full, powerful, and regular. The sphygmographic tracings show a high pulse wave, a rapid and abrupt rise of the ascending line, and an equally rapid and abrupt fall of the descending line. Redness of the face, neck, and chest is the contrary, there was a tendency to plethora, and the patient had a dread of a stroke of apoplexy. The duration of the

affection may vary from a few weeks to two years and even longer.

In the tachycardia of the menopause the author thinks the ætiological facor is hyperplasia of the ovarian stroma. This increase of connective tissue in certain predisposed individuals, acts in some way, unknown as yet, upon the terminal nerves of the ovarian tissue and, through them, in a reflex manner upon the sympathetic nerve—the accelerator of the heart. This assumption receives support from the fact that tachycardia is frequently seen after the operation for the removal of the ovaries, which is followed by a shrinking process of the internal genital organs. In the way of treatment, the author has obtained the best results from a systematic course of mild purgatives, suitable dietetic and hygienic regimen, such as mountain air, a bland diet, and active bodily exercise, and wet applications to the lower part of the abdomen. A course of some weeks at Marienbad is usually followed by improvement. Small doses of the bromides generally afford relief from the unpleasant sensations attending the attacks.— *N. Y. Med. Jour.*

OBSTETRICS.

UNCONSCIOUS PARTURITION IN A PRIMIPARA.

A case of high obstetric and medico-legal interest is to be found in the *Archives de Tocologie* for November. Physiologically painless parturition is rare. Tarnier has related some cases, including one instance where a Canadian woman occasionally dropped a baby on the ground, at term, without noticing it. In Howard's case labor took two hours; the patient was reading a book till a quarter of an hour before the child was delivered, which event occurred after some straining, not sufficient to make her cry out. In Dr. Brunon's case, newly reported, a married woman, aged twenty-two, had a troublesome cough one day shortly before term. The coughing was accompanied with lumbar pains, which increased. At eleven o'clock in the evening the patient tried to pass a motion. She sat over one hour in the closet, believing that her pains signified painful defecation. Then she went to bed. At half-past one o'clock she woke up feeling a desire to pass a motion, with lumbar pains such as she had felt before when constipated. As she rose to go to stool a smart lumbar pain occurred, and she felt something between her thighs. On handling it she found, much to her surprise, that it was the head of her first-born. She declared to Dr. Brunon that the pains were entirely lumbar, she had no colicky sensations, and none of the expulsive pains usually so severe, especially in primiparæ. The desire to defecate was strong, and she stated that the child might have been born into the pan of the closet without her recognizing the truth of her condition till the moment of its delivery. The patient was an intelligent well-educated woman, free from any neurosis. This case proves that in the case of an inexperienced person an infant might be expelled into the water in the pan of a closet without any intention of infanticide on the part of the mother.—*Epitome.*

THE NECESSITY FOR IMMEDIATE SURGICAL INTERVENTION IN LACERATIONS OF THE PERINÆUM.

The misfortune which has just happened to an unfortunate practitioner, who was mulcted damages to the amount of nine hundred dollars and costs by the Superior Court for neglecting a lacerated perinæum, should be a lesson to every accoucheur in this country. It was shown that the laceration was complete, extending into the rectum, and had been followed by procidentia of the uterus and other distressing accidents.

The duty of attending to all extensive lacerations of the perinæum at the time when the lesions are fresh is insisted upon by the best obstetrical writers, and it is certainly the practice of the most successful obstetricians in this country to immediately put in three or more deep stitches, thus approximating and keeping in apposition the lacerated parts till union takes place. It matters little what material is used for the sutures; some use chromacized catgut, and make a deep continuous suture, and certainly catgut has in many instances proved to be sufficiently enduring; others prefer silk, others silver wire. Every physician has, or ought to have, in his pocket-surgical-case, ligatures and curved needles, and if a sufficiency of interrupted sutures are inserted immediately after confinement, the old-fashioned quilt suture may well be dispensed with. It will not always be necessary to give the patient ether in order to insert the stitches, though some nervous and susceptible subjects may require it. It is true that after a long and difficult confinement case, the medical attendant is generally tired out and shrinks from another operation, especially where anæsthesia is required, but he must muster strength and nerve for the occasion if he

would escape liability to a suit for malpractice; and if he inserts a few stitches he will save himself from the imputation of ignorance or carelessness. Modern juries have not the name of being very tender to the feelings, reputations or pockets of physicians, and it goes without saying that the most vigilant and attentive will be the least likely to be "caught napping."

There are one or two errors that should be cleared away, lest they should be subterfuges for the careless. The one is that tying the knees of the patient together will answer the same end as sutures. "Only a very credulous person," says Lusk, "really believes that he has witnessed union by first intention in extensive ruptures as the result of tying the knees together, and enjoining rest upon the side. The action of the transversi-perinei muscles tends to draw the torn surfaces apart. Moreover, the necessity of separating the knees in passing urine, and to enable the nurse to clean the genitalia, makes it impossible to keep them in contact for any lengthened period."

The other mistaken notion is that primary perineorrhaphy rarely succeeds, "that the perinæum is not merely torn but is contused and mangled, and that the previously œdematous and infiltrated tissues are predisposed to gangrene, and consequently are in the worst possible condition for immediate union" (Charpentier). Moreover, it is said that the lochial discharge will always be an obstacle to the union by first intention.

According to the experience of very many who have tried the immediate operation, and who have seldom or never failed to obtain good union, if due pains toward cleanliness and antisepsis are taken, no such unfavorable result as Charpentier points out need ever be feared. Certainly, Charpentier's American editor warmly favors the immediate repair of any laceration beyond the first degree, for the reason that thus a possible entrance sight for septic matter is prevented, and also because the operation is a simple affair after delivery, and more extensive and complicated, the longer we wait. He recommends that in case of laceration to the second degree only one deep silk or wire suture should be used; if the rent be deeper, three to five will be needed. In any event, the patient should be placed on her side, a wad of absorbent cotton inserted into the vagina to catch the discharges, the wound carefully washed and trimmed of jagged shreds, and then, guided by the finger in the rectum, the suture is passed deeply around, at one-half inch from the margins. The line of suture should be dusted with iodoform, and a narrow strip of cotton laid along the perinæum and the posterior vaginal wall. The after-treatment will consist in dusting with iodoform twice daily, and replacing the strip of cotton by a fresh piece till the sixth or seventh day, when the sutures may be removed.—*Bost. Med. Surg. Jour.*

PÆDIATRICS.

TREATMENT OF DIPHTHERIA BY MERCURIAL INUNCTIONS.

Smakowsky, in the *Allgemeine Med. Central-Zeitung*, May 13, 1891, reports three cases of diphtheria, which recovered after inunctions of mercurial ointment. Every hour 4 grammes of mercurial ointment were rubbed into the skin of different parts of the body, as in the treatment of syphilis. In this way the patient got, in all, about 30 grammes daily. The only other treatment that was used was gargling with a solution of chlorate of potash. The treatment lasts for one day only. If there is any relapse it may be repeated. Unfortunately the treatment is of little value in the treatment of infants, since they cannot gargle. The patients treated were from seven to eight years of age.

QUININE IN WHOOPING-COUGH.

Professor Emil Ungar, advocates the free use of quinine in whooping-cough (*Deutsche medicinische Wochenschrift*, No. 18, 1891), having used it with much success during several epidemics in the last six years. He attributed the great differences of opinion as to its value which have prevailed amongst previous observers to the difference in the dose employed. Large doses are necessary, and, suiting the exact quantity to the age of the patient, he advises the use of from 16 to 22 grains per diem, in divided doses. Even to children below three months of age he would administer $\frac{3}{4}$ of a grain at each dose. These large quantities are only given for a few days, and as improvement begins the dose is diminished, and is given twice or only once a day instead of three times. This diminution should be effected slowly. Dr. Engar believes that children will bear relatively larger doses than adults, and has had no experience of the deafness or disturbed digestion which the drug is said to have produced in the hands of other observers. In his cases the vomiting, after the paroxysm, was rapidly stopped, and appetite

and digestive power seemed to be improved. The recorded cases of aural disturbance are for the most part in adult persons, and not in children. No untoward results of the treatment occurred in his practice, the only symptom presumably attributable to the equinine being the occurrence of very rapid cardiac action in one case. The main difficulty in the way of the administration of quinine to very young children is its bitter taste. Perseverance in many cases was rewarded by the children actually becoming fond of it, although almost all rebelled at first. The struggle induced during the swallowing of the medicine is apt to produce a fit of coughing, followed by retching and vomiting. In order to avoid this occurrence it is advisable to give the quinine directly after a paroxyism has taken place. To older children the quinine may be given in capsules. Administration *per rectum* is not satisfactory. By subcutaneous injection good results may be obtained, a neutral hydrochlorate being used, which is fairly oluble in water. The curative effects of quinine, however administered, are not apparent immediately, except in a few instances. As a rule, from three to six days elapse before the severity of the attack begins to diminish and the vomiting to cease. The disease then appears to run a milder course, and at the end of a fortnight the attacks are slight and infrequent. The tendency to complications, broncho-pneumonia, etc., is lessened, and improvement may be looked for in the large majority, though not in all cases.—*Brit. Med. Jour.*

THE SCARLET FEVER TONGUE.

The method followed by Dr. Newman was to sketch the tongue as soon as the diagnosis of scarlet fever was made, and after two or three days to compare its condition with the sketch already made. This was done in forty-eight cases, the chief symptoms of the disease being noted at the same time. The mucous membrane of the tongue passed through three stages: 1. Swelling and cloudiness of the epithelium; 2. desquamation; 3. regeneration of the lost epithelium. The first thing noted in the scarlet fever tongue is a swelling of the entire mucous membrane, giving rise to longitudinal folds and channels, easily distinguished from the folds noted in bulbar paralysis by the consistency of the tongue. The cloudiness of the epithelium gives rise to the changed color of the tongue; it appears grayish-white, white, or yellowish-white—that is, the tongue is coated. The back of the tongue is chiefly affected, the sides and tip being red. The desquamation does not take place as uniformly over the tongue as the other processes. It commences on the papillæ fungi-formes. These latter appear as submiliary or milary round, dusky-red dots, surrounded by a white area. Thus the tongue gets its strawberry appearance. In the third stage the sides of the tongue, and more particularly its tip, retain their red appearance and strawberry aspect longer than other parts of the tongue. The new epithelial layer may be so thick that the tongue appears coated anew. The swelling gradually goes away. The above is the usual course, but there may be departures from it. In two cases the dulling of the epithelium was absent, and the desquamation excessive, so that the longitudinal muscle bundles were seen. In another case, the epithelium was only detached in part, and a new layer developed quickly, so that the tongue appeared coated throughout. It resembled a dyspeptic tongue. The author says that the fungiform papillæ appeared round and erect; whereas in the dyspeptic tongue they are elongated, and slope toward the tip of the tongue. Generally speaking, the digestive troubles cause the tongue to be coated before the scarlet fever process has had time to affect it. If scarlet fever be combined with a septic condition, the latter determines the condition of the tongue. As the new infection appears early or late, so is the scarlet fever process interrupted. Generally speaking, the tongue, after losing its epithelium, developes a strawberry appearance, and then becomes dry. Bleeding cracks may be seen, which can lead to deep ulceration, or true diphtheritic membrane may appear. Out of the 48 cases the tongue was typical in 38. In 4 cases, one or two of the stages were only very slightly developed; and in 6, the typical scarlet fever tongue was altogether absent. Of these 6, there was severe gastric disturbance in 2; another case was in a chlorotic girl; in the fourth case there were symptoms of septicæmia, and death on the fourth day; and in the fifth and sixth cases the tongue was quite unaltered. Thus it would certainly appear that the scarlet fever tongue is a tolerably frequent occurrence in the disease, and that when absent, complication or previous illness has altered the tongue in other ways. The tongue recovers its normal state with the cessation of the fever. In the majority of cases the tongue had lost its epithelium, and had become strawberry in three to five days. There is no proportionate rela-

tion between the intensity of the scarlet fever poison as it affects the skin and tongue. Both processes are probable brought about in the same way, as their tolerably equal occurrence and their appearance much about the same time would suggest; and again, certain departures from the ordinary have shown a peculiar resemblance. Thus in one case with a puerpuric rash, the same was noted on the tongue; and in another, where syphilis was present as well, pustules were seen on the tongue as well as on the skin. Thus this condition of tongue, though not always present, is observed in many cases. It is, however, of less value than it might be, as it does not appear before the fourth day or so, and it may certainly be present in other illnesses.—*Deutsches Archiv fur Klinische Medicin.*

HYGIENE.

DR. KLEIN ON BACTERIA.

The first of a series of three lectures on Bacteria; their Nature and Functions, was delivered at the Royal Institution on Tuesday last by Dr. E. Klein, F.R.S. He said that perhaps in no branch of biological science had advances in the methods of research within the last twenty-five or thirty years been so enormous as in this subject. In 1828 Ehrenberg recognized the existence in water of minute mobile organisms which he considered to belong to the group of animalculæ known as infusoria, an assumption which was now known to be erroneous. In 1837 Schwann demonstrated the presence in atmospheric air and in dust of living microscopic beings, which he showed by direct experiment to be endowed with the power of producing in certain fluids those chemical changes termed alcoholic fermentation or putrefaction. Pasteur fully established the proposition that the different fermentations, such as alcoholic, butyric, acetous, mucous, and lactous fermentations, and also the decomposition of putrescible matter, were caused by definite and different species of such minute living beings—microbes,—and that without them such changes did not occur. This proposition implied that these changes were dependent on and ultimately bound up with the life and growth of these microbes, and if these were prevented from gaining access to such fermentative matters, they would remain unchanged or sterile. This was the principle which Sir Joseph Lister had applied in surgery, with the well-known brilliant results. The *role* of these microbes in atmospheric air had been minutely worked out and beautifully illustrated by Professor Tyndall, whose share in finally establishing that with these simple organisms, belonging almost to the world of the infinitely small, the same fundamental principle obtains as in other living organisms of plant and animal life, be they ever so large and complex—namely, that each organism had descended from an antecedent parent organism, and that no such thing as their origin from non-living matter occurred. Within comparatively recent times it had been shown that a variety of the most important and extensive processes of oxidation and reduction occur in nature, such as the oxidation and resolution of dead animal and vegetable matter, the breaking up of complex nitrogenous materials—such as albuminous substances, and their ultimate change into nitrites and nitrates, so essential to the life and growth of plants; that specific fermentation, so important in food stuffs and articles of diet, and many other processes are caused by, and intimately connected with, the growth and life of microbes. Though the importance of some species as useful agencies in nature is recognized, the importance of other species, as being the cause of disease affecting plants, animals, and man, is not less. The term micro-parasite is given to this latter group. Amongst the microbes there is one great group to be dealt with in particular, called "bacteria," because it possesses more or less the shape of a minute rod. Like the true or higher fungi, they are free from chlorophyll, and are composed of cells, a cellular membrane with living matter or protoplasm within, and they multiply by fission, for which reason they are called "fission fungi." Bacteria could then be defined as microscopic elementary organisms, composed of a cellulose investment of the protoplasmic contents, and which multiply by simple fission. They are classified into micrococci or cocci, bacilli and spiral vibriones, according to whether they are spherical, cylindrical, or curved and spiral. The lecturer exhibited a large number of microphotographs of bacteria, prepared by Mr. Andrew Pringle and Dr. Bousfield.

All these organisms, when they have found suitable nidus, multiply with enormous rapidity. It has, for example, been found from observation—all conditions of moisture, medium, and temperature being favorable—that some multiply in twenty minutes, others in thirty minutes, and others in forty minutes. Staphylococcus

aureus, which in its growth produces a peculiar golden-colored filament, grows with great rapidity when sown in a medium-like, faintly alkaline broth at a temperature of 37°C. Into a sterile broth tube a definite number of organisms are put—say, eight cocci per cubic centimeter. If placed in an incubator for twenty-four hours at 37°C. and then counted, it is found that 1 cc. contains 640,000—that is to say, one organism has multiplied eighty thousand-fold in the first twenty-four hours. It would not be expected that the same rate would obtain in the second twenty-four hours, because the material had been used up. After forty-eight hours' growth the counting yielded 248 millions per cubic centimeter—that is, only four hundredfold. In seventy-two hours it was found that there were 1184 millions per cubic centimeter—that is to say, during the last day each had multiplied only fivefold. As the material is used up the rate of multiplication decreases. Another instance of the rapidity of growth was given. A rabbit was inoculated subcutaneously with 20,000 bacilli of fowl cholera, and died in twenty-four hours. It was found that 15,150,000 microbes were contained in 1 cc. of the blood of the animal. The whole of the blood contained twelve hundred millions, showing that each bacillus in twenty-four hours had multiplied sixty thousand times. Those organisms which have their habitat in ordinary temperatures grow very rapidly. Professor Ferdinand Cohn was the first to study the rate of multiplication on the hay bacillus. He calculated that in two days the number of these would be so great that the whole Atlantic Ocean would be densely peopled by them if there was sufficient nutriment, which, fortunately, there is not, and therefore many of them had to go to the wall.

By the motility of bacteria is understood active locomotion. They spin round, they dart to and fro, and pass rapidly over the field of the microscope, and that is on account of their possessing one, two, three, or even a multitude of fine hairs. The organism of typhoid fever possesses several of these flapellæ. It has been shown that for retaining this motility a plentiful supply of oxygen is required. If, in a chamber, at one end oxygen is supplied, and at the other nitrogen or hydrogen gas, the organisms will all move towards the end where the oxygen is. If the oxygen is replaced by nitrogen or hydrogen the movement gradually ceases. If water is covered with a scum, it is most probably a motile bacillus which grows in the fluid and which is driven to the surface, where it can derive the best supply of oxygen. In many cases the motility of the organisms is interfered with by their own chemical products.

Within certain of these organisms, but not in all, are formed peculiar corpuscles, which bear the same relation to the organisms as the seed does to the plant. This spore formation is almost entirely limited to the order of bacilli, and in this group there are very many species which do not possess this power. In a number of different species of bacilli, some of which are capable of forming spores and others not, those which have this power may look on very quietly, while those that do not will exhaust all the nutritive material present, growth and multiplication will then cease, and they will gradually die away. Those which form spores have a much better chance of bringing forth new generations than the others.

When organisms do not find suitable materials for their growth, certain changes are brought about called "involution changes." When the bacillus ceases to possess that high degree of vitality that the normal typical bacillus possesses, it gradually undergoes changes which lead to its death. Illustrations were given of what had been described as involution changes, but which were not so. For instance, tubercle bacilli grown under not very favorable conditions may be swollen, and others may appear branched. Some observers took these changes to indicate the death of the organism, but the lecturer was not quite sure that such were "involution changes."

In all these considerations, particularly in reference to the formation of spores, there were a number of facts of very considerable practical importance. The germination of those organisms which form spores takes place on the same principles as the germination of the spores in the higher fungi. The envelope is broken, the protoplasm contained within it shoots out in the shape of a rod, which when it is fully formed elongates, divides and multiplies as in the case of the parent. In this way one bacillus, by repeated multiplication, forms a new crop. When these have reached a certain phase of development they again form spores which go to start a new generation. These spores have a much greater power of resistance than is possessed by the non-spore-bearing organisms, and can withstand high temperature, dryness and the influence of light, so much so that it has become almost a recognized method of determining whether a par-

ticular species of bacilli forms spores by subjecting the suspected organism to a temperature of 95° C. or 100° C. If they survive this exposure, and if they survive drying, it may be taken as established that the growth is spore-forming.—*Lancet.*

MEDICAL CHEMISTRY.

THE ALKALINITY OF THE BLOOD UNDER NORMAL AND PATHOLOGICAL CONDITIONS.

E. Pieper (*Arch. f. Pathol. Anat.*, 116, 337; *Ber. Deut. Chem. Ges.*, 23, 666) found that the alkalinity of the blood varies within narrow limits. The blood of children is less alkaline, in reaction, than that of adults; of women, less alkaline than of men. The alkalinity of the blood is increased during *digestion, muscular activity* and *vomiting.* The spasms of strychnine poisoning cause a decrease.

The author states that in *leukemia, diabetes mellitus, arthritis deformans, chronic articular rheumatism, anemia, cancerous cachexia uremia,* and in fevers the alkalinity of the blood is, as a rule, decreased, while in chlorosis it is increased.

ESTIMATION OF NITRATES AND NITRITES IN WATER BY ELECTROLYSIS.

At the recent annual meeting of the Bristol (Eng.) Pharmaceutical Association, G. F. Schacht, presented a paper on this subject. After alluding to the importance of being able to determine the wholesomeness of potable water, he discussed as his special point in such determination a recent suggestion to employ a "couple" of aluminium and mercury for the evolution of the hydrogen in the well-known process for the estimation of nitrogen existing as nitrates and nitrites in the sample. Messrs. Ormandy and Cohen had published this suggestion, and their paper had appeared in the *Journal of the Chemical Society* for September of last year. He had taken some pains to assure himself of the accuracy of the method, and, with the modifications to which he would presently refer, it became so easy of execution that he recommended its adoption with confidence. Mr. Schacht then proceeded to show the process in detail, and to describe it thus: Measure 100 c. c. of the sample into a plain upright glass vessel of capacity equal to about 130 c. c.; take a strip of aluminium foil (about three inches of ordinary ribbon= 0.4 gram), clean both surfaces by rubbing with tow dipped in liquor sodæ, wash thoroughly and dip it into a solution of mercuric chloride (half a saturated solution and half water) for one minute. A deposit of mercury takes place upon the aluminium, and a "couple" is formed. Wash it well under the tap, put it at once into the 100 c. c. of the sample, and cover the glass vessel loosely. Let these react until the metals become a deposit and no more gas is evolved. Gently stir the mixture and allow the deposit to subside. Take 10 c. c. of the clear supernatant liquid, dilute with 90 c.c. of pure water, and add 1 c.c. of Nessler's solution. Note the color. Perform a comparison experiment in the usual way with standard solution of ammonium chloride 0.0001 gram of NH to each c.c. Then x being the number of c.c. of solution required $0.0001 \times x \times 10 \times 700$=grains per gallon of ammonia, and this figure multiplied by 0.828=grains per gallon of nitrogen. In experiments which aim for exact results, it is better to close the mouth of the vessel with an india rubber stopper through which passes a glass tube, bent so as to allow the gasses to pass through a small quantity of water, which should be mixed with the sample before the final stirring. The author submitted a table of results of experiments, which showed that great accuracy could be attained by this process.

NEWS AND MISCELLANY.

ANATOMY AT OXFORD UNIVERSITY.

A grant of $35,000 has been asked by the Convocation to procure permanent accommodation for the teaching of anatomy.

DR. LASSAR.

The French Government has conferred the Order of the Legion of Honor on Dr. O. Lassar, the General Secretary of the Tenth International Medical Congress, held in Berlin in 1890.

THE CHICAGO MEDICAL RECORD.

This is the title of a new medical monthly edited by Dr. Archibald Church. It is well printed and contains a number of valuable original articles, together with society reports, etc.

THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF TEXAS.

The Medical Department of the University of Texas, will open its doors in the Autumn

of this year. Dr. Thos. D. Wooton, of Austin, is the Regent. A large Hospital will be adjacent to the school, and every effort is promised to make the school one of very high standard.

RESIGNATION OF SURGEON-GENERAL JOHN B. HAMILTON.

Dr. John B. Hamilton, Surgeon-General of the Marine Hospital Service, has resigned to accept the chair of Surgery and Surgical Pathology, in the Rush Medical College, of Chicago. Dr. Walter Wyman, who has been his chief assistant, has been promoted to the vacant position.

THE NEW YORK POST-GRADUATE MEDICAL SCHOOL.

At a recent meeting of the Directors of the New York Post-Graduate Medical School and Hospital, H. J. Boldt, M. D., was made Professor of Diseases of Women; William James Morton, M. D., Professor of Electrotherapeutics, and Aug. Caillé, M. D., Professor of Diseases of Children.

A NEW CREMATORY.

The incineration of the dead becomes more and more popular. Crematories are rapidly increasing in number in all civilized countries. One of the most important structures of this kind will be at Heidelburg, a site having been given by the municipality for the purpose. The cost of erection is estimated to be over $10,000.

THE UNIVERSITY OF PENNSYLVANIA.

The Trustees of the University of Pennsylvania have elected—Dr. George A. Piersol, Professor of Anatomy; Dr. Harrison Allen, Professor of Comparative Anatomy; Dr. John B. Deaver, Assistant Professor of Applied Anatomy; Dr. Edward Martin, Clinical Professor of Genito-urinary Surgery; and Dr. Holmes, Demonstrator of Anatomy.

THE LEHIGH VALLEY MEDICAL ASSOCIATION.

The eleventh annual meeting of the Lehigh Valley Medical Association will be held at the Mansion House, Mauch Chunk, Pa., on Thursday, June 25, 1891.

During the morning business will be transacted and papers read. At 3 P. M. the Society will take in an excursion on the "Switch Back."

UNIVERSITY OF BUDA-PESTH.

A festal commemoration of the 111th anniversary of the University of Buda-Pesth was held on May 12th.

Prof. Koranyi on the 14th inst., celebrated the twenty-fifth anniversary of his appointment as Professor, and received over 200 congratulatory telegrams.

The Medical Society has decided to build itself a house which will probably cost about $20,000.

FOOT-BALL CASUALTIES.

The last foot-ball season in England has been noted for the casualties recorded. Among the injuries noted in the Lancet, which ended fatally are, asphyxia, caused by paralysis of the muscles of respiration, acute peritonitis, injury to the brain, rupture of the intestine, rupture of the right kidney and abdominal injuries. Is it not time that this game should be so modified as to relieve it of the unnecessary dangers now attending it?

WHO OWNS THE PRESCRIPTION?

The *British Medical Journal* says that the question of the ownership of prescriptions has been settled by law in New York, Massachusetts, and a few other States. In all the cases it has been decided that the druggist is the owner of the prescription. The following is the text of a judicial pronouncement lately delivered on the subject: "The question before the Court appears to be simple indeed. A patient applies to a physician and receives from him certain advice for which he tenders a fee. The physician hands a piece of paper to the patient, purporting to be a written order for certain goods, called drugs, which order is filled by a merchant or apothecary. The payment of the fee and the delivery of the goods or drugs terminates the verbal contract, and the druggist keeps the prescription as an evidence that the contract has been fulfilled so far as he is concerned. The druggist can, if he so please, on his own responsibility renew the drugs, for he is but a merchant, and has a perfect right to sell drugs to anyone and in any shape. He need not keep the prescription, nor is he bound to give a copy; but should error occur, he has no protection in case of

suit." It is said that some time ago a decision in the same sense was given by the judge of a court in Berlin.

The *Journal* adds in comment on the above: "The opinion here quoted does not seem to be sound; the patient receives the prescription in return for the fee which he gives to the physician, but he is under no obligation to give up the prescription to the druggist. He is bound to show it to him, or else he cannot get the drugs he wants, but the document belongs to the patient, who could, if he choose, enforce its return by action. A publisher might as well claim to keep an author's manuscript as evidence that he had correctly printed it, as a druggist to keep the prescription as evidence that he had fulfilled his contract to supply the drugs ordered of him. Such a claim on the part of a tradesman against his customer is not recognized as valid by English law, whatever may be laid down by the courts of other countries."

In a paper recently read by Mr. Joseph England, before the Philadelphia College of Pharmacy, this question of ownership was discussed, the writer taking decided ground in favor of the druggist being owner of the prescription. He cited a long legal opinion furnished by an experienced lawyer, Mr. R. C. McMurtrie, in support of his view.

"If the patient is the owner," says Mr. McMurtrie, "he may at any time within six years demand the paper, and if it is not surrendered, sue as for a tortious conversion of his property. If he can't do this he certainly has no title." Various instances are cited also showing the necessity to the druggist of owning and keeping the prescriptions.—*Med. Rec.*

JOHNSTOWN CORRESPONDENTS ASSOCIATION.

THE representatives of the great daily papers who worked in Johnstown during the days following the dreadful flood of May 31, 1889, have formed an organization known as the Johnstown Correspondent's Association. On the anniversary of the great disaster they meet and renew the friendships formed then, and recount the stirring scenes of those eventful months. This year they met in Johnstown and were delightfully entertained by the Cambria County Medical Society and the citizens generally. There were present representatives of the New York *World*, *Herald*, *Times* and *Mail and Express*, of the Philadelphia *Times*, *Record*, *Press*, *Inquirer* and *Public Ledger*, and of all the Pittsburgh papers. The entire party numbered about seventy-five persons. The different parties arrived in special cars on Saturday, May 30, and were at once taken in charge by a committee of citizens and by the following medical men: Drs. A. N. Wakefield, W. B. Towman, L. N. Mayer, G. W. Wagoner and E. S. Miller. The party were provided with carriages and driven to all the points of interest in the historic valley. The rooms of the Medical Society were used as the headquarters of the party and had been handsomely decorated for the purpose. An elegant lunch was served, during the entire day, in the rooms, and all enjoyed this feature of the entertainment very much. The members of the Medical Society turned out in full force and took special pride in receiving the guests at their rooms because they had a magnificent library to show them. The large and valuable collection of medical and literary works was recently given to the Society by Dr. Joseph M. Toner, of Washington, D. C. It comprises a large portion of a collection, to the acquirement of which this distinguished and learned gentleman has devoted his life and fortune, hence one can readily fancy how valuable it must be. There are nearly 5,000 titles, and among them are all the famous medical works of the last 150 years. Dr. Toner passed his boyhood days in Johnstown and entered upon the study of medicine many years ago, in the office of Dr. John Lowman, who was then, as he is now, one of the most distinguished practitioners of medicine and surgery in Western Pennsylvania. Dr. Toner has never forgotten the early home or his old preceptor, and now in his declining years he has manifested his affection by enriching the medical profession of the community where he first imbibed medical knowledge. The Toner Library contains many volumes which could not be duplicated. The members of the Medical Society are justly proud of the splendid library and the many other articles of interest and value which Dr. Toner has donated to their use, and took very great pleasure in exhibiting their possessions to the visitors. The Toner Library is the first public one established in the city since the flood and was therefore a centre of interest. It is well cared for in one of the principal business blocks of the new city. At the close of their day of sight-seeing the visiting reporters were given a banquet at a hotel, by the citizens, and left the city surprised at the wonderful progress it had made since the flood, and delighted at the elegant manner in which they had been entertained.

THE
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Clinical Lecture.

DOUBLE OÖPHORECTOMY—SUPRA-VAGINAL HYSTERECTOMY.

BY WILLIAM GOODELL, M. D.,

PROFESSOR OF GYNÆCOLOGY, UNIVERSITY OF PENNSYLVANIA.

DOUBLE OÖPHORECTOMY.

Gentlemen:—The first case that I shall operate upon before you to-day, is that of a woman, forty years old, whose ovaries I shall remove. The history of her case is as follows: She has been married a good many years, and has born several children. For the past few years she has been constantly suffering with a dragging, gnawing pain in her left side, which has been steadily growing worse until now she is a constant sufferer, wholly unfit for any work—an invalid, in fact. Her pain is evidently of an ovarian origin, and my diagnosis is that the left ovary, which is much enlarged, is the one principally affected. At this woman's age, especially as her maternal instincts have already been gratified, we should feel no compunction in removing her ovaries, feeling confident—as we do in this case—that they, or at least one of them, is the cause of her present pitiable condition. These organs can no longer be of any material service to her, but are capable of doing infinite harm, and, perhaps, eventually causing the woman's death. You see she is emaciated, and shows unmistakable signs of years of suffering.

Before being brought into the clinic the patient's abdomen has been thoroughly washed and scrubbed and covered with an antiseptic bandage. This, we now remove, and again thoroughly wash the parts with a strong mercuric solution—1:1,000—and shave off the pubic hair, in order to render the field of our operation absolutely aseptic. Another point, which I have already drawn your attention to before now, is to keep your instruments immersed in water. Dust, or dirt, laden with infection, will not reach or adhere to submerged instruments. Finally, be most careful to count your instruments, and especially your hæmostatic forceps, both before and after the operation, writing their number down on paper and not trusting to your memory. This precaution, while apparently superfluous, is of great importance, since it renders the accidental leaving of a hæmostat or other instrument in the wound impossible.

I first make a superficial incision about four or five inches long and about midway between the umbilicus and symphysis pubis, down to the linea alba or uniting line of the sheaths of the recti muscles. Tearing the muscles apart, I come to the præperitoneal fat, and under it to the peritoneum. This membrane is caught up with a pair of dressing forceps, and nicked open. Taking good care beforehand to feel whether a loop of intestine is in the fold. The bleeding points in the skin and muscle are caught with hæmostatic forceps. Having now opened the peritoneum I am able to introduce my fingers into the abdominal cavity. I can now feel the womb and, following the course of the Fallopian tube, find the left ovary which is adherent, but not so firmly as to cause any great difficulty in loosening it. This is the ovary in which she has suffered so much pain. After firmly ligating the tube I proceed to remove it. I now bring out the right ovary. This is also adherent, but very slightly so. But now that I have removed it I see that it, as well as the left, is diseased. The condition of the ovaries before us is quite sufficient to account for the woman's sufferings during the past years, for they are much enlarged by cystic degeneration. You see that the removal of these ovaries has occupied only a few minutes. To be sure the case is a simple one; there has been no pus, and but few adhesions.

We shall now proceed to close the wound.

I first place a hot, wet, aseptic sponge in the wound over the intestines. Now I introduce deep silk sutures which include every layer of tissue. Next the linea alba are brought together by a continuous and buried gut suture. Before drawing up these sutures, and tying them, we remove the sponge which has been protecting the intestines. This row of buried gut sutures is most important and should never be neglected. Its value is in preventing subsequent hernia, and I have seen ugly looking hernias, even in very small incisions, resulting from a disregard of this proceedure. The deep silk sutures are now tied, and all that remains to be done is to apply the usual antiseptic dressing and binder. You see that the closing of the wound has occupied more time than the operation, but in operations of this kind every detail must be performed with equal exactness, in order to ensure subsequent successful results.

FIBROID TUMOR OF THE WOMB; SUPRA-VAGINAL HYSTERECTOMY.

The patient now before you is a woman, thirty-nine years old, and married, but has never born any children. For several years back she has had both menorrhagia and metrorrhagia, and now copious bleeding occurs every two weeks. These came from a large fibroid tumor of the womb. This long continued bleeding has greatly prostrated the patient, so that she is a confirmed invalid although very fat, as you see. The fat, however, is pale and flabby. Strange to say, bleeding in women very frequently acts as a fat producer, as it has done in this case.

What the operation will be, I cannot yet say. If I can get at the ovaries I shall remove them; if not, I shall have to remove the womb, making the operation a hysterectomy.

You see I make a much freer and bolder incision in this case than in the previous one, on account of the abundant fat. These fatty cases are always difficult to operate upon, and I, for one, do not like them. After cutting through this first thick layer of fat, we come to the tendenous sheath of the two recti muscles. Separating them, another layer of flabby fat is revealed which I also cut through, and with it the peritoneum. I find the omentum adherent to the abdominal wall. This is stripped off to get into the peritoneal cavity.

I now have my hand on a large fibroid tumor of the womb, and I cannot reach the ovaries. The case is a bad one—worse indeed than I at first expected. First of all we must enlarge this incision considerably in order to give ourselves more room, and to get the tumor out. The necessarily large incision is the principal objection to fat cases; but here the unusual size of the tumor would call for a large opening anyhow.

Notice how that the catch in the breathing of the patient throws the intestines forward and make them protrude from the wound. This is another unpleasant feature of the case.

I find the tumor adherent to the anterior wall of the abdomen, but think I can get it out. We are dealing with a large tumor of the womb, evidently a fibroid, and our opening is still too small to permit of its removal and I therefore enlarge it. Through the incision you may now get a glimpse of the growth. See these angry and tortuous veins running over its surface; some of them are as large, almost, as my index finger.

At last, by breaking up adhesions, I have succeeded in bringing one end of the tumor into the womb, you see it is as large as the head of an adult; but I am still unable to get at the tumor, which is very voluminous and has no neck. I must, therefore, again enlarge the wound. Dr. Taylor will now push up the womb *per vaginam*, so that I may be able to get a better idea of the limits of the growth. It is bound down by adhesions everywhere, and while I might now be able to forcibly bring it out into the wound, I dont like to break up adhesions that I cannot see or get at. This time, in enlarging the wound, I have cut through and far above the naval. By screwing a corkscrew into its upper portion I get a good strong purchase and deliver all but the pelvic portion out of the wound.

As it has no neck, the lower portion being as large as the upper, I shall have to enucleate it out of its uterine capsule, and convert the flaccid capsule into a nedicle. To do this safely I place two rubber tubes tightly around the lowest portion of the tumor, to arrest hæmorrhage. I use two rubber tubes as I care not to trust to one alone. Remember, that if during the course of enucleation these tubes should break, we should have a terrific hæmorrhage which could with difficulty be arrested, perhaps not soon enough to save the patient. Practically, therefore, the patient's life hangs upon the strength of these rubber tubes, and I therefore take the precaution of using two instead of one.

Let me now proceed to the enucleation, which I begin by making a circular incision

around the growth about 3 inches above the tube constrictors, and gradually dissect the capsul free from the tumor. This is difficult because, by inflammatory action, the tumor has cohered to the uterine walls. By the aid of knife and scissors the lower portion of the tumor, through very slow enucleation which is unusual, has decreased from about eight inches in diameter to about four, and when I have completed the enucleation, the pedicle will be only as large as my wrist. I then replace the rubber tubes with this wire ecraseur, which is kept from slipping off by two transfixing pins. The redundant portion of the stump is cut off.

I now close the abdominal wound, first by sewing, with gut, the peritoneal surface of the stump below the wire of the ecraseur to the peritoneal edges of the wound. Next, deep sutures are passed through all the different layers of the abdominal wall. Then the tendonous fascia divided at the linea alba is, as in the former operation, united by a continuous and buried gut suture. The deep silk sutures are now tied, and the wound dusted with iodoform and covered with corrosive sublimate gauze. To avoid putrefaction of the stump it is buried in boric acid. This has been a formidable operation, but the outlook is by no means a bad one.[1]

DIAGNOSIS OF VESICAL TUMORS.—HÆMATURIA AND ENDOSCOPIC EXAMINATION OF THE BLADDER.

BY DR. GUYON,

PROFESSOR OF CLINICAL SURGERY AT THE NECKER HOSPITAL, PARIS.

Gentlemen:—To-day I will operate on a case of vesical neoplasm, but before bringing the patient before you, I wish to give you some practical points regarding the diagnosis of vesical tumors, and in doing so, will pay particular attention to the subjects of hæmaturia, and the direct examination of the bladder by means of the endoscope.

The patient in question is a man 65 years old, who, for the last three months, has without an apparent cause, been suffering from hæmaturia. Nearly every time he urinates, he also passes more or less blood, both at the beginning and at the end of micturition. Sometimes his urine is clear, but then even it will usually deposit a few blood clots. Apart from this symptom, the patient's urinary organs are normal. Urination is neither abnormally frequent nor painful, and is always accomplished with ease, and especially so when the urine is free from blood, it is then clear, limpid, and free from sediment. Direct examination shows that the urethra is normal and that the bladder is not sensitive to moderate dilatation. The injected fluid will pass out of the catheter entirely clear, except the last few drops, which will be colored with blood. The quantity of the blood will be materially increased if the catheter is allowed to remain in the bladder for a few moments, before the expulsion of the liquid. The prostate, seminal ducts, and testicles are normal.

If, before resorting to an endoscopic examination, we make an examination by palpation, one finger being inserted into the rectum, and the other hand over the bladder, we will find an enlargement on the right side. This growth, if such an examination will warrant us calling it such, is neither hard nor clearly defined. The sensation experienced by palpation is, rather, as though this portion of the bladder was of a syrupy or gluey consistency. The patient's general condition is good, and an examination of the kidneys is negative.

This examination alone, is sufficient to warrant the assumption that we are here dealing with a versical neoplasm, but then among the diagnostic signs, that of hæmaturic is the most important.

In all such cases hæmaturia is always present. The urine will become bloody without any attributable reason; the patient has not been suffering either from any great exhaustion or from any traumatism; there is never any alteration in either the frequency or mode of urination, and the act is accompanied by no pain. In brief, to all appearances we are dealing with a healthy and absolutely normal bladder, with the exception of this one symptom—hæmaturia.

If such a hæmaturia has lasted for three months, accompanied by these characteristics, there is only one diagnosis for us to assume, viz., that of vesical neoplasm. In my opinion, a neoplasm will exist for some time before the appearance of the hæmaturia. This is the weak point in this important diagnostic symptom. For, if the hæmaturia set in as soon as the tumor began to develop, we might accomplish much by an early treatment. Unfortunately, however, the symptom may not appear until the growth has obtained considerable size. In fact, the appearance of this symptom has no connection to the size or growth of the tumor; it

[1] Two weeks later this patient was exhibited to the class. She had done extremely well, having had a temperature which reached 100° only on one day.

may appear comparatively early, or not until the growth has been present for some time.

One might reasonably suppose that the amount of the hæmorrhage depended upon the size of the tumor, but unfortunately this is not the case, and the diagnostician is liable to fall into grave error if he gauges the size of the tumor by the extent of the hæmorrhages. A small tumor will not infrequently give rise to enormous hæmorrhages, so severe, indeed, as to materially effect the general health of the patient, while, on the other hand, tumors of a very large size will only occasion trifling hæmorrhages; but, as you see, that the size of these hæmorrhages have nothing to do with the volume of the tumor, it is quite different regarding their frequency. The hæmorrhages due to neoplasms are always frequently recurring.

It has been said, and I have said it myself, that vesical tumors sometimes exist without causing any hæmaturia. I believe, however, that on this point it will be well to make one observation, viz.: that in order to be positive of the absence of this symptom, a most careful examination of the urine is necessary. Let me cite a case.

About two weeks ago, I operated upon a case of enormous vesical tumor, so large indeed that the operation only resulted in being a palliative. The patient, however, had had apparently no hæmaturia. He claimed never to have passed blood to his knowledge. The urine, upon superficial examination seemed clear and limpid enough but a closer examination revealed the existence of several minute clots at the bottom of the vessel. Without doubt, these would have been overlooked by many, and the case declared to be one of vesical tumor without hæmaturia.

While the quantity of the hæmorrhage is entirely independant of the size of the tumor, it is, however, of considerable diagnostic value in determining the nature of the growth. Certain hard carcinomatous growths found in the bladder do not bleed, while epitheliomæ bleed easily.

If the hæmaturia is insufficient to allow an accurate diagnosis, we must use other means in determining the nature of the growth, viz.: direct examination of the bladder by means of the endoscope. In the case which serves as the object of this lesson, it is very probable that an examination of the bladder one year ago would have confirmed a diagnosis of vesical tumor, and, in that case, the operation could have been promptly performed and the patient's chances would have been far more favorable than they are now. It would, however, have been necessary for the patient to consider himself ill enough at the time to need medical advice, which was not the case. But even if he had come to a surgeon, there would have been no symptom which could have warranted an examination of the bladder by means of the endoscope.

The symptom of hæmaturia appears too late to assist in the diagnosis of the disease at its outset, and at the same time, it is the first symptom that we have to indicate the presence of any abnormality. The result is, that the endoscope is rarely, if ever, the means of the primary diagnosis of vesical tumors.

But may not the endoscope confirm an uncertain diagnosis? Certainly, yes. It will tell the surgeon whether he is dealing with a small tumor, surcharged with blood, or with a large growth. By its aid we can also frequently confirm the nature of the tumor; whether epithelial, or a papilloma, or benign. Very frequently a simple variety of epithelioma is met with and unfortunately the endoscope is for many reasons rarely of any practical value in these cases.

Even if a bladder is sensitive and will not permit of an endoscopic examination on account of the pain produced, its inflation with a liquid will frequently enable the direct examination to be made. But these conditions are often only intensified in patients suffering from vesical tumors. With these even chloroform sometimes fails to allow the bladder to be distended sufficiently to permit of an examination with the endoscope.

In the patient before us, and upon whom I am about to operate, distention of the bladder was accompanied with ease. But we here have another trouble confronting us. We counted on the urine in the bladder being clear, and not disturbing the transparency; but on the contrary, so soon as we introduced our endoscope into the distended bladder, we found the instrument surrounded by an opaque liquid, which rendered the attempt at an endoscopic dilation unfruitful. To remedy this we endeavored to keep a continual stream of water running through the bladder, but this did not sufficiently clear its contents to enable us to get any view of the tumor.

Another frequent difficulty attending the successful use of the endoscope, is the size of the tumor. If by the endoscope we cannot get a view of the limits of the growth, the examin-

ation will accomplish but little more than palpation. In short, the value of the endoscope as a diagnostic means in cases of vesical tumors at least, has been much overrated. Nevertheless, in cases of small growths, when it is possible to clean the contents of the bladder, so as to obtain an unobstructed view, the instruments may often be of great service. Its use will also tell the operator whether he is dealing with an old or recent growth.

So, you see, that while the endoscope may be applicable for the examination of vesical tumors, it does not fulfil all the requirements that one might *a priori* suppose it to do. It is perhaps well for me thus to draw your attention to its weak points, in order that you may be guarded against the exaggerated enthusiasm of many eminent genito-urinary surgeons. Still, in cases where its successful employment is possible, it is undoubtedly of very great value to the diagnostician. It is a great mistake to imagine for a moment that an endoscopic is called for in every case of vesical disease, but it is an equally bad a blunder to dispense entirely with its use. It was for this reason that I attempted such an examination in the patient before you, but unfortunately with negative results. We will now proceed to the operation itself.

While the diagnosis of vesical tumor is confirmed, I am largely ignorant of either the size or nature of the growth, and therefore must run the risk of finding a very extensive disease, perhaps infinitely worse than the general symptoms would indicate. Do not forget, however, that in this case we have no history of abundant hæmorrhages, but on the contrary, the bleeding has only been slight, but it has occurred every day. Yet such operations are frequently attended by severe hæmorrhages. In one of such, I have seen an anæmic patient die on the table. In these bleeding tumors the ultimate success of the operation is also greatly jeapardized. That we have here a tumor which bleeds easily has been shown by the fact that we have been unable to free the bladder sufficiently from blood to enable us to make an endoscopic examination.

An operation having been decided upon, a final question arises, and this is, the possibility of a recurrence of the disease. Without doubt, in this case, where the indications are towards a vesical cancer, recurrence is probable, but the operation will, more the less, be of great value to the patient. I could quote you the histories of a number of similiar cases upon which I have operated, and the results, while perhaps only temporary, are nearly always encouraging and satisfactory to the patient. At present the tumor is increasing in size, already his general health is beginning to suffer, and the hæmaturia is a constant drain upon his system. I will endeavor to remove the entire growth, if possible, and in all probability the man will be able to return to his work, and his health will greatly improve. A case I operated upon in September 1889,—a very aggravated case—is now doing well, and apparently in excellent health.

The patient before the class was then operated upon. The case was found to be one of cancer. The growth was removed by means of the galvano-cantery and the currette. The patient made a rapid and excellent recovery from the operation.—Translated from *Le Bulletin Médical.*

Communications.

STRYCHNIA AS A HEART STIMULANT IN PNEUMONIA.

BY J. J. THOMAS, M. D.,
YOUNGSTOWN, OHIO.

In *St. Bartholomew's Hospital Reports*, vol. xxii, there is to be found a paper by S. Herbert Habershon, M. B., on the use of strychnia by hypodermic injections in heart failure, particularly that of pneumonia. The Reporter of Dec. 10th, 1887 contains an editorial upon the paper in question. Habershon places strychnia in the front rank as a cardiac tonic and claims to have seen from its use better and more lasting effects than from ether, ammonia or alcohol. Digitalis even, he considers to be secondary in value to strychnia in all cases of exhausted heart muscles, particularly in cases of disease of the mitral and aortic valves and in pneumonia with Cheyne-Stokes respiration and marked cyanosis. He advocates the use of the drug hypodermically and in larger than ordinary doses, citing cases which appear strongly to support the conclusions of his views. The matter made a more than passing impression upon the mind of the writer, and it was determined to give this use of strychnia a trial in every appropiate case occurring during a period of sufficient duration to make any deduction one of value.

Several years have passed by since the publication of Dr. Habershon's paper and

numerous opportunities have been afforded me of putting his views to the test. My observations have been made chiefly upon cases of pneumonia, giving the remedy hypodermically in all cases of unusual severity, especially where heart failure threatened. I have kept no record of cases for publication, but while penning these lines my mind reverts to occasions whereupon the hypodermic administration of $\frac{1}{25}$ gr. doses of sulphate of strychnia, repeated every six hours, certainly appeared to act with wondrously tonic effect upon the o'erwrought and jaded heart, turning favorably the tide of life in seemingly hopeless cases.

Recent studies of the *modus operandi* of heart stimulants and tonics appears to support the validity of the claims made by Habershon in favor of the value of strychnia.

The Harveian oration of Dr. James Andrews of St. Bartholomew's, delivered Oct. 18, 1890, consists largely of a critical comparison of the actions of this class of remedies in question upon the pulmonary and systemic circulations. It is shown that strychnia "produces, in both carotid and pulmonary arteries, a rise in pressure, *especially marked in the pulmonary artery.*" In this particular respect the drug compares very favorably with the best, ordinarily and heretofore commonly resorted to in threatening heart failure.

It is universally conceded that heart exhaustion is a common and direct cause of death in pneumonia, and however practitioners may differ as to the use or non-use of venesection in the early stages of that disorder there is none to dispute the propriety and the necessity, in many cases, of applying to the flagging heart the whips and the spur ere the crisis is reached.

Dr. Andrew H. Smith has contributed to the *American Journal of the Medical Sciences* an extremely valuable article on "Acute Obstructive Diseases of the Lungs," in which he calls renewed attention to the fact that it is the *right* heart that bears the chief burden in pneumonia; though he makes no mention of the peculiar properties of strychnia in furnishing to that particular side the needed stimulus. He emphasizes the importance of making a daily study of the pulmonary circulation by observation of the pulmonary valve sound.

Dr. Bradford, in the *New York Medical Journal*, of Jan. 10, 1891, compares the the actions of digitalis and strychnia, his article being at once elaborate and scientific. He prefers the latter in conditions of enfeebled heart muscle, for the reason that its action is indirect, being expended chiefly and primarily upon the spinal cord and sympathetic system. It imparts tone to the functions of the entire muscular system and is a tonic in the truest sense of the term. He reports cases of collapse restored by strychnia given freely, and urges its use, particularly in pneumonia and diphtheria.

It is altogether probable that to some, if not to a marked extent, strychnia acts directly upon the muscles of the right side of the heart and in the same manner that digitalis acts. This with its wider influence in imparting a better nervous tone makes it the ideal heart stimulant in pneumonia. In critical cases I give it in doses of $\frac{1}{25}$ gr. every 4 or 6 hours, and can ask no better illustration of the resources of therapeutics than that afforded by the quick response which almost invariably follows. Hypodermically appears to be the best mode of administration. Whatever may be the *rationale* of its operation, I have, within the last few years, witnessed too many illustrations of the value of this article to be at all hesitant in pronouncing it an invaluable resource in pneumonia, and one that will often and often be found to justify the confidence reposed in it. A tolerance of the drug appears to obtain in pneumonia, and to secure good effects the dosage must be decided and frequent.

THREE CASES OF HYSTERO-EPILEPSY.

BY H. F. BYERS, M. D.,
CARUTHERSVILLE, MISSOURI.

On June 26, 1889, I was called to attend Mrs. H. B., a married lady, 26 years of age, the mother of two children. On my arrival the lady was found lying dressed upon the side of the bed engaged in conversation with several neighbors. Her husband stated that she had had several very hard "fits" with no preceding or apparent cause whatever, her health was usually excellent, but that on several previous occasions she had had "spells" of greater or less severity, the first happening shortly after the birth of her elder child, some four years ago. The thermometer was placed in the axilla and showed a temperature of 99° F. The pulse was normal, skin moist and natural, bowels constipated. She answered readily and intelligently all questions, and complained of hot flashes and various pains. When asked to describe any symptoms that advised her of the approach of a spasm, she said that they always came

on with a violent sense of cramping and a drawing in of the big toe of the right foot, and that something seemed to rise from that point and choke her. While engaged in conversation with her she suddenly exclaimed: "There, doctor, one is coming on now." The big toe of the right foot, of course, claimed my immediate attention, it was found to be forcibly flexed, while the foot was extended to the utmost, in rapid succession all the muscles of the right limb, and then of the whole body, became involved in tonic convulsions. The head was thrown back and to the left, the eyes rolled back so that the whites alone were visible, and there followed a convulsion in all respects, save only one, like those of puerperal eclampsia—the tongue was not bitten. Two more convulsions occurred in rapid succession, when they were controlled by the hypodermatic injection of morphiæ sulphatis gr. ¼, and atrophiæ sulphatis gr. $\frac{1}{150}$. A prescription of potass. bromidi gr. xx, chloral hydrat, gr. x, morphiæ sulph. gr. ¼, to be given at intervals varying from one to four hours, p. r. n., controlled the spasms for twenty-four hours, when the hypodermatic injection was repeated, with only temporary relief. After exhausting my therapeutical resources, and a considerable amount of patience, and being out of the reach of consultation, I gave, with a view of its relaxing effect, as well as the mental impression, 2 grains of the yellow sub-sulphate or mercury and a pint of warm water. The lady began in about fifteen minutes to alarm her husband and friends by assuring them that "death had struck her," and by giving directions as to the disposition to be made of her effects. This was followed by copious emesis and immediate permanent relief, so far as the "fits" were concerned. This lady is in robust health and had had no return of the convulsions in almost two years, and so far as is known to the writer, no other manifestations of hysteria.

Case No. 2.—Miss E. P., aged 19 years, first seen on August 2, 1890. She had had before my arrival eleven spasms similar to those described in case No. 1. Except that she gave no manifestations of consciousness in the interium until after my arrival, when it was found that she was aware of all that happened in the room. The globus hystericus was a well marked feature, the girl tearing frantically at her throat as the convulsions came on. The treatment, consisting of morphia and atropia, hypodermatically, chloral per rectum and by the stomach, bromides in large doses, clearing the alimentary canal by large doses of castor oil, and an emetic of powdered ipecac, all failed to afford permanent relief. Four ounces of blood were taken from the arm, with some benefit, (caused possibly by the mental rather than the physical impression made by its abstraction.) As a last resort, on August 6th, two grains of the yellow sub-sulphate of mercury were given, followed by copious draughts of hot water, immediately after its physiological effects secured most prompt and permanent relief, the patient having had no return of the symptoms as late as a few months ago, when she removed with her family to an adjoining state.

Case No. 3.—Miss J. C., aged 20 years, of nervous temperament, though of ordinary good health. There is no history of any previous attack of the kind. There had been, shortly before her illness from derangement of the catamenia incident to exposure to draughts or cold. On the 21st of March, 1891, she complained of headache across the brow and afterwards of alternate flushings of heat and cold sensations, with some pain in the lumbar region. On the 22d she was apparently well, making no complaint whatever until about 6 P. M., when she had a "fit." These "fits" continued at shortening intervals until the 24th, when the writer was called. The patient was found propped up in bed with pillows, perfectly conscious and able to answer all questions intelligently. She said there was some pain in her back and general muscular soreness and also a "curious pain in her tongue." When asked if she knew when a spasm was coming on she said "yes, they come on by an appearance like smoke before my eyes and then I smother." While still engaged in conversation with the writer she began to spit and slabber, when several bystanders immediately seized her and held her in anticipation of the spasm which came on immediately; the whole frame was convulsed, the eyes rolled back and alternately opened and shut very rapidly, (something I have not noticed in any other case,) the jaws were fixed at first and then came to with a sharp click or snap. Consciousness during the fit was abolished. The tongue was not bitten. There was no blood in the saliva that escaped from her mouth. The duration of the spasm was probably 30 seconds. In exactly 15 minutes, during which time complete consciousness was regained, another convulsion occurred. They were controlled by chloroform, and a hypodermatic injection of morphiæ sulph. gr. ½, atropiæ sulph. gr. $\frac{1}{75}$, with the effect of stopping them until the next day,

when I was re-called. During my absence some of the neighbors, who had collected, suggested the idea of hydrophobia from a dog bite she had gotten two years ago. It was not known that she had heard the conversation but soon afterwards she began to have a hoarse cough and to try to bite those around her as well as to lap the water which was given her to drink. It should have been mentioned that her appetite was, during the whole of her illness, voracious, and that there was no difficulty whatever in swallowing. On my second visit I found her raving, she did not appear to remember my name, calling me "Moad," (the name of a neighboring farmer,) but knew my business perfectly well, begging me to "keep the smoke away." She bit at her father who was supporting her head, and had a convulsion exactly like those described above. I talked to her and told her that her biting and lapping was all nonsense, then holding her head and placing a cup of water to her mouth bade her drink, she lapped. Throwing her head back the cup was pressed between her teeth and its contents were swallowed without difficulty. Her arm was corded and an ounce or two of blood drawn with no effect except to slightly increase the interval between the spasms. Two ounces of castor oil were given which caused a large dejection in a short time. Chloroform, bromides, morphia, gelsemium, and chloral, were all tried with temporary relief, lasting only during the sleep which was produced. There had been occasional vomiting from over-loading the stomach with food and water which had been given her without stint during my absence. I had been unable to make a positive diagnosis up to the second visit when the pseudo-hydrophobic symptoms manifested themselves. The neighbors were sent away and quiet secured. The emetic used in both the other cases was given with the happiest results, the snapping, lapping and fits all stopping as the deathly sickness caused by the emetic came on, and a quiet sleep supervened as it went off. On the next day she said she felt very well and wanted to get up. The temperature which at my first visit had been 99° F. was on the day after the trouble was ended but normal, the thermometer in the axilla registering 97° F., attributable, no doubt, to exhaustion. A small amount of a stimulant with a liquid diet and a general tonic were ordered.

A talent may be developed in the cloister; character can only be perfected in the world.

THE RELATION OF IMPERFECT SURGERY TO THE SEQUELÆ OF PELVIC AND ABDOMINAL OPERATIONS.[1]

BY JOSEPH E. HOFFMAN, M. D.

So much has lately been said and written relative to the results and, therefore, to the justifiability of abdominal and pelvic operations that it is necessary for the candid critic and honest operator to stop and consider what on the one hand is the exact status of the repentant critics and of their changed attitude toward the position and merits of surgery, and on the other how far inexact methods are accountable for some of the failures and misfortunes of what would otherwise be a field of almost unprecedented brilliancy and encouragement in the results that have been obtained in this branch of surgery.

In the first place it is to be noted that of all the men who have gained prominence in any of the various domains of surgery in general, not one has abandoned that specialty from a surgical standpoint in order to treat it empirically by any other method. Sir Henry Thompson, for instance, has not departed from the exact surgery of the bladder in order to destroy its calculi by solvents or electricity; Mr. Macewen, bone surgery; or Schaeffer, orthopædics. What is meant to be here illustrated is that when a man has once chosen a specialty and worked up to that specialty by an experience gained by natural selection and application, his specialty has become so much a part of him that its abandonment is just as impossible as the negation of the laws of gravity. His training makes it the law of his mental gravity, and the same laws apply to it as to weight and inertia in the physical world. The greater his experience, the longer his training, the more certain is he in regard to the limitations, the requirements, the possibilities of his work, and as a result of all this his position, when taken, is an entrenched one, from which he is not to be moved and made a weathercock of every shade of opinion, whether of madmen, fools or philosophers, for none of these are apt to speak from a practical experience, in surgery at least, and practice, not theory, has made surgery what it is.

That there are specialties in surgery has come about by the consensus of opinion among surgeons in general, and physicians, strictly so-called, that there is need of them.

[1] Read before the Phila. County Med. Society, May 27, 1891.

The specialist in any branch is the living embodiment of the necessity of his work. To whom then is the title of "specialist" to be applied? In each branch confessedly, to those who work conformably with their expressed sentiment, or if not teachers whose line of procedure is uniform and the result either of their own experience wrought out by laborious painstaking, or conforms with that of other expert workers in the same line.

To that class of see-saw workers who anon are this and anon are that the name specialist should be applied. For accurate exact surgery, we cannot look to the electrician or the dabbler in it. If one condemns a procedure to-day and extols it to-morrow we are brought to the point of inquiry, Which view is correct, which has the vantage of observation? or perhaps, Is either expression of any value whatever, or is the change made like that of the slight-of-hand man to puzzle his audience and bring in a set of new admirers to be pleased by the rare and startling exhibition of surgical acrobatics, a surgery in which the constant is differentiated out of sight by the variable.?

These inquiries and lines of thought are suggestive of some of the causes we have to consider in the relation of imperfect work to the sequelæ of abdominal and pelvic surgery. What has been said of experience as a necessity for a firm faith in the necessity of any special branch of work, is true with just as much force when the ability to do such work is considered. The appalling eagerness with which men with only a diploma as a justification and a safeguard from the hand of the law to do abdominal surgery is one of the startling features in the history of this work. In no other branch of the art has there ever been any approach to such audacity. That fools rush in where angels fear to tread has never been more aptly illustrated. Training has been, nay still is, rejected, while the work is sought, and if the case is found willing to be offered up an offering to the prurient itch of a surgical pretender, the case is at once reported as a wonderful cure in the hands of the youthful aspirant, or if unsuccessful is recorded, heralded, and posted up as a warning against all surgery in general, and against that sugeon in particular who has been rash enough to loan both his instruments and experience to a neophyte with no other experience than ingrown toenails and vaccination, now hiding and excusing himself and his failure behind the experience of the too easy friend, who by a mistaken kindness has martyred both himself and surgery and done both an irreparable injury. I take it that it should be the rule of all surgeons to assist no one who has not studied, observed and assisted in such work. There is no excuse or reason here for a man to begin with all the faults and errors of the early operators, and again work out the technique of this branch of surgery in a series of failures and calamities that once well-nigh led to its abandonment. The work of such men cannot be other than imperfect, and must reflect upon surgical interferences in these affections in the minds of the uncritical and unthinking. Another class of operators to be carefully watched, is those who, by fair means or foul, are bound to obtain prominence. These men have lain in wait for operations, as the moonshiners for a cloudy night, to bring themselves into prominence, let us say notoriety. These men have opened abdomens, not to operate, but to do the first step of an operation. I can this moment put my hands on such a case, in whom nothing was found wrong, but there was a chance to perpetrate a pet fad, and the woman is now dragging out an existence after three subsequent operations, all the result of the first unnecessary tinkering. If we are to criticise abdominal surgery, let us not do so with the results of such operators and their methods before our eyes. Let us rather criticise the crude methods and cruder morals, or if you please the code that tolerates apprentices and dabblers to do with the bodies of our patients for the like of which we would ruin the reputation of our tailor or well-nigh mob a cobbler. That such surgery has been overdone is just as true as it is that it has no right to be considered surgery at all. And just here it is to be said that among men of this class, I mean those who have done the kind of work just referred to, we are bound to find our latter-day conservatives and repentants. Of all those who have gained and kept a name as foremost in the rank of abdominal surgeons, we find no recanters. These are almost always to be found in the lines of failure or discouragement or embarrassment. If a man has made blunders he is a fool not to perceive them, or if the real spirit of surgery is beyond him and he feels it, he alike is bound on the one hand to retrieve past misfortune by so-called conservatism, sitting on the pons asinorum watching the stream of surgery flow by, and with it the hopes that he no more has chance of realizing. On the other, having neither the spirit of surgery within him nor the courage to attain it by drill and application, nothing is left

for him but to be a dissenter, to decry all surgery as mutilation, nothing justifiable but conservatism. From this standpoint I make the plea that each one of us, before he condemns surgery, its justifiability or its results, shall judge of them all. As sensible men and women, saying that we are in need of surgical attention, to whom shall we go? To the apologists for their work, to those who have operated themselves into repentance, who have made an experience only to regret it? Certainly not. Experience and judgment in this work is no more to be gotten in lumps, than can knowledge be bought by the wagonload of books.

If there has not been an antecedent experience from which special knowledge has been differentiated, this special knowledge, though it may be wide enough theoretically, practically is cramped and dwarfed. The wider the general experience, the more exact will be the special. Having considered the class of operators we must look to for errors and repentance, let us look at the work as surgery simply, not in the light of miracles it is supposed and often promised to work. Miracles nothing human can perform. No surgeon has a right to promise an absolutely certain result in every case. I have too frequently heard promised, "The operation will make you a well woman." Patients are persuaded into operation when they should be left to choose it for themselves. I have nothing but condolence, may be contempt, for the surgeon who has to persuade his patients to be operated upon. Herein comes a great deal of the blame of surgery in the abdomen and pelvis. Who ever heard of a surgeon's having to persuade a patient to put a splint upon a broken leg or a ligature around a bleeding vessel? The indications for every operation should be plainly stated, and the patient or her responsible friends be responsible for the decision for or against operation.

The disasters of operation, on the other hand, ought not to be attributed to the inherent danger of abdominal or pelvic interference. We are to remember that, as a rule, except in extreme hæmorrhage and in diseases implicating the kidneys, bladder, or uterus, abdominal operations ought to be, as a rule, successful. It is well for all aspiring operators, and for many who consider themselves established, to ponder well the words of Savage. He says: "I think we ought to get into our minds, as a prominent idea, the view that after an abdominal operation a death should be considered to an extent as preventable, and that when one does occur we should hold with ourselves a moral inquest as to the cause, how it might have been prevented, and whether in any way it was associated with aught relating to ourselves." As time goes on, I am more persuaded that in the question of success or failure, less and less depends on the patient, her conditions and surroundings, and more and more on ourselves and the attention to certain details which have been found to be essential." With such a standard as this a man cannot fail to do the best possible work. High ideals, though they never be quite realized, are a safeguard against the nauseating complacency with which certain operators contemplate their woeful results, blaming either Providence or the nurse, allowing themselves to escape unscathed.

It is well just here to consider Mr. Savage's expression when he says "Less and less depends upon the patient, her condition and surroundings," for this is at once too wide and at the same time widely true. It is just as evident that patients go on suffering time and time again, until they are hopelessly ill, as it is that, if taken earlier, no matter what their surroundings, they could have been cured. This fact must stand out a perpetual contradiction to those who in charity advertisements for private aggrandizement laud in season and out the over-laudatory achievements of hospital surgery. Right here I want to say that the best results that have ever been gotten in this city in a wide series of cases have been done in private houses, many of them have none of the recognized conveniences either for comfort or ideal cleanliness. The room that the patient occupied was often the only clean one in the house, and yet, as a rule, all of these patients get well. We, as operators, have no business to scare a patient into a hospital for our own convenience.

By doing so we bring into the chances of her recovery an additional element of doubt.

In estimating the importance of the sequelæ of any surgical operation, we must compare them with the gravity of the condition for which the operation was done. Generally speaking, promptitude in ridding a patient of any surgical disease is a step toward avoiding after complications as well as primary impediment to rapid satisfactory work. If a patient is suffering from suppurative abdominal disease, which by its presence threatens life primarily by septicæmia, or indirectly by secondary implication of vital organs, the fact that a hernia or fistula remains after operation is no argument either against the advisability of operation nor

against the results of the operation. The argument rather rebounds against the critics, and should convince them that early operation, while giving the patient a better primary chance for life, secondarily would leave him in better condition to resist the influences that tend to prevent prompt healing and, therefore, conduce to fistula and hernia formation. To appreciate these and other pathological points, a thorough appreciation of the pathology of pelvic inflammation is necessary. A devotee of the ancient doctrines of pelvic cellulitis, has no hope of becoming either a skillful diagnostician in or a surgeon of pelvic disease, since his supposed pathology does not agree with the actual condition of affairs, and hence he is handicapped from the start and the incubus of tradition must be fatal to his progress

In advanced cases of tubal and ovarian disease, theory will tell him to treat the disease by derivative measures, aiding himself possibly by closure of a cervix, when lo! the patient grows worse in his hands, and is only rescued by the merest chance by final resort to the abdominal section. In such cases it is no uncommon condition in which there is such a generally vicious condition that healthy tissue in which to place a ligature can scarcely be found, and the result is a fistula, through which a ligature ultimately is passed. Here only the most careful technique, of making a good stump, cleaning out the necrosed tissue for this purpose, and diligence in using accurately all precautions against infecting the ligature while it is being placed around the pedicle, will prevent the formation of fistula, or at least of the conditions that will result therein. Herniæ are cited as a perpetual menace against the propriety of abdominal operation. Women are said to be worse from them than from their original trouble. In these cases the value of personal opinion goes very little to announce the true condition. The surgeon or the critic of surgery who estimates the value of either medicine or surgery by the reports of the patient will argue from very uncertain and worthless data. Some patients will complain more from a slight hernia than originally they did at the trouble necessitating operation, or at least their complaints are very distinct. In the first they groaned in anguish, begging relief, while at last they repudiate all surgery because they no longer suffer torture at each menstrual period. To this they are frequently encouraged by meddlesome women who, never having suffered, cannot appreciate the tortures of disease, or by malevolent professional rivals who descend to such indecent methods in order to compass the ruin or professional distrust of the community against the operator. As a rule, herniæ and fistulæ especially should be rare. Hernia is a constant danger in fat women, both as primary owing to the uncertain healing of the fat, and secondarily as a result of weakening the abdominal support. Hence the rule should be in all such cases to keep the patient in bed much longer than is required to heal the incision, and after getting up constantly to wear an abdominal support. A failure so to advise is just as culpable as to admit the elastic support over a dislocated patella, and can only occur as the result of sheer carelessness or ignorance of the requirements of this special class of cases. Fistulæ besides resulting from ligatures, may have their origin in lesions of the intestine resulting from the freeing of adhesions. Fecal fistulæ are rarely persistent, almost never so, and in the great majority of cases can be avoided if a careful watch is had over the bowel involved in the adhesions. Here the result of bad work must result disastrously, both so far as perpetuating the fistula is concerned and in doing damage to the intestine. To obtain perfect results the intestine is so to be mended, not only to prevent leakage of its contents, but also to avoid adhesions compromising its function and conducing to obstruction. In this relation the deaths from intestinal obstruction after operation are to be considered. In the hands of experienced operators this rarely if ever happens, and if it occurs it is recognized and relieved. One death occurring from such cause coming under my knowledge was the direct result of placing the patient shortly after operation in the care of a physician without any experience whatever in a surgical way. The complication accordingly was not understood, and by the time surgical aid was sought the woman was practically dead. Imperfect after-attention of surgeons eager only to operate, has been and will continue to be the cause of much reproach to surgery. Until his patient is out of bed and moving about freely, the surgeon has no right to dismiss her as cured. If a hernia occur after operation it is the duty of the surgeon to explain its nature and make early effort to cure it. The earlier it is cured the less will be the obstacles in the way of permanent relief. To have a patient die of operation for hernia, the result of the surgeon's own operation, ought to be a calamity almost unheard of. Nevertheless it ought to be understood that, owing to the size of the sac, and the consequent extent of the adhesions, some herniæ

are practically incurable unless at a great risk. One such case is still fresh in my memory, in which, after a long relief, the hernia again returned. The woman was very fat, and with the difficulties of a former operation fresh in my mind I refused another.

There is no use in operating and reoperating in unfavorable cases until at last the patient is lost. Surgery nor the surgeon receives credit, while the patient receives no benefit. Imperfect knowledge of how to drain is at the bottom of many failures in the surgery of the abdomen. I once knew the question to be asked by a man following up the matters of abdominal surgery, very far off to be sure, "How long does the tube stay in—till it smells?" I have seen a tube removed containing more than an inch of coagulated serum, this last in the hands of an operator who ought to know better than now to advise the cleansing of the tube once every twelve hours, or some such long interval. A drainage-tube that needs cleansing or emptying only once in twelve hours had better be kept clean in the bag until it is wanted. Such advice as to the use of the tube is worse than worthless. To be valuable, information must come from those who are informed not from those who are guessing or using the tube under protest or because some one else uses it. It is better not used than badly or carelessly used. Drainage and the conditions that require it must always remain a disputed question, but one fact alone must forever keep its opponents on the defensive, and that is that those who advocate it most have had the most experience with it, and that their cases so treated run a most uneventful course, even in most serious antecedent conditions. One point negativing its advantages in some cases urgently needing it, is the semi-delirious condition of the patient during the first few days immediately following operation. These patients are unruly and their unrest will disturb the position of the tube and render it at once irritating and useless. I have two patients in mind in whom I believe the tube on this account would havs been a serious disadvantage. In another in whom I considered it advisable, I removed it at once when it had become displaced. I shall never forget the anxiety with which I watched over this patient through several days, fearing the oncoming of peritonitis and dreading the necessity of reopening the abdomen.

But if the proper use of the drainage-tube is essential to success, it is to be remembered that crevices created by desultory breaking up of adhesions at the bottom of the pelvis, having no common outlet by which they may drain, are beyond the reach of a single tube; hence, in appendicitis, for example, the careful placing of an additional rubber tube often gives security when otherwise, at best, the end would be doubtful. A case of my own is here vividly before me and brings out the theory justified by results.

When it is sought to break up adhesions on either side of the pelvis because one side seemingly presents less difficulty than the other, the more difficult should not be abandoned when once begun, unless it is plainly evident that by freeing the simpler side a vantage-point is gained from which to attack the other. Going from side to side but gives two difficulties where but one before existed, and in event of prolonged operation, when completion for the patient's sake must be abandoned or postponed, adds additional complication and takes away some of the chances of recovery. Such methods are common to inexperienced workers, and must be abandoned if good results are desired.

Incomplete operations are at the bottom of much of the criticism made as to the uselessness of abdominal or pelvic surgery. When an operator removes but one ovary and tube for hæmorrhage of a fibroid he confesses to the knowing critic his incompetency to deal with the conditions he meets. He is as likely to cure such hæmorrhage by such surgery as to raise chickens from china eggs.

By this it becomes manifest that a lack of resources is fatal to ideal surgery. The surgeon who deserves the name is a man of emergencies. The surgeon in masquerade, like the journeyman actor, tears, not his passion, but his patient to tatters. By every operation so done a certain number of women whom surgery might save are frightened and so hindered from receiving the benefits of real surgery.

The easier operations are the bane of the would-be surgeon. Suceeding in one of these, he imagines he has conquered the whole field and at once rests easy in his assurance. To such men, and their patients generally, absolute failure in their first attempts is a distinct gain, for it frightens them away from the possibility of doing further harm.

Many other points leading to and illustrating the same idea, and showing conclusively where mal-operation and needless operation are most likely to occur, and why, could be multiplied. But this is not necessary. It is plain that that operator only is safe who has

first learned by a long and painstaking apprenticeship, thoroughly and patiently, the principles of the work he is to perform; who, grounding himself in the principles, has applied them at the side of capable instructors; who, when he operates, does so for the patient's good and not for his own glory. Such a man—such men—must both give their patients their best hope and be the saviors of surgery from its false exponents, who only disgrace it.

The men who get the best results are those who work along the safe lines, departing from them as necessity compels according to the exigencies of each individual case; not those who from the threading of a needle to the cleansing of a tube or the washing of their hands strive to be original. Such originality hides real surgery in a multiplicity of details and paraphernalia, and risks the sufferer to exalt the operator.

(For discussion see Society Reports.)

Society Reports.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, May 27, 1891.

The Vice-President, De Forest Willard, M. D., in the Chair.

DR. JOSEPH E. HOFFMAN SUBMITTED A PAPER ON THE RELATION OF IMPERFECT SURGERY TO THE SEQUELÆ OF PELVIC AND ABDOMINAL OPERATIONS.—(See p. 814.)

Dr. M. Price: I am fully in accord with the belief that most of our deaths can be accounted for by some want of care on the part of the operator before, during, or after operation. I recall two cases in which the previous care before the operation had everything to do with the result. In one, the woman was sent into the house to be operated on. The patient declared that the bowels had been freely moved fifteen or sixteen times on that day. The operation was done, and it was found that the patient had not had the bowels opened for two weeks. She had an impermeable stricture, which would permit the passage of nothing but the watery contents of the bowels. The fatal result might have been avoided if the patient had been under the care of a trained nurse before the operation. I have seen this accident twice.

Many men who profess to be abdominal surgeons will go to a case of supposed tumor, or some other condition, prepared to do only that operation. They go to do an ovariotomy and a hysterectomy is required. The result is a death. The surgeon must carry with him everything that can be needed. I have seen many hundreds of abdominal sections, and have seen about as many mistakes as most men, and that, too, in the most competent hands.

As to the success of abdominal surgery. Does any one pretend to say that when a surgeon amputates a leg, giving the patient a useful stump, that is not a success? I hold that it is. If we had subjected an abdominal case to such a risk of life, and had left it in such a crippled condition, what a howl there would be on the part of the medical profession! You take a woman who has been lying around, unable to assist herself in the slightest, and you remove the disease and allow her to move around with some little pain, some little crippling of her gait. You cannot expect to make a perfect cure. Many of the objections, and many of what are called sequelæ, are the fault, not of the surgeon, but of the patient's delay.

Dr. G. Betton Massey: The attempt has apparently been made to make an apology for surgery. I think that from some points in view the surgery of the abdominal cavity needs an apology. By some we are told that the bad results are due to improper operations, and by others that they are due to the diseases themselves. I would take no exception to that class of bad results in those cases of abdominal disease incapable of being cured in any other way than by surgery. I have been much impressed with the mistake which is the keynote of Dr. Hoffman's paper—that is, the mistake made by surgeons persuading women to be operated on who do not require any operation. I have seen a number of these patients who, fortunately, have failed to take the advice given by the surgeon. I have now under observation a lady who was persuaded to have the ovaries removed in order that the cervix might be repaired. A little reduction of the congestion and enlargements of the parts in a rather stout patient showed that the whole trouble came from a subinvoluted uterus and a hypoplastic enlargement of one side, which was rapidly improved.

Dr. O. H. Allis: It seems to me that a good deal depends upon who gives the advice whether an operation should be done or not. A patient comes with sarcoma of the jaw, where nothing but the removal of the entire jaw, or at least half, will save life. Although the surgeon urges operation with earnestness, the patient goes away and

nothing is done. The delay is fatal. The same is true in strangulated hernia. The patient should be urged to undergo immediate operation.

Dr. William E. Ashton: The question of hernia following abdominal section is one of great importance. The surgeon who says that he never has a hernia does not follow up his cases. The majority of hernias are due to a failure in properly uniting the sheath of the rectus. I do not believe that fat women are especially liable to this accident. The integrity of the abdominal wall depends entirely upon the sheath of the rectus muscle, and this should be sutured in all cases. I believe, also, that a large number of hernias are due to getting out of bed too soon. The patient should not get up under three weeks. There is not much benefit in an abdominal support. I have found it impossible to keep any bandage closely enough applied to relieve the ordinary strain. If the patient is doing heavy work, an abdominal support may be of service.

In regard to fistula caused by a ligature, I might mention a clever device told to me by a doctor from Texas. He takes a number of horse-hairs, doubles them over upon themselves and ties them together, and passes them into the fistula and turns them around. In this way he often succeeds in bringing away the ligature.

I believe it to be a good plan to have the patient in a hospital, if possible, in order that she may be under observation and control. I do not believe that there is more danger of sepsis in cases operated on at home than in those in hospitals. Sepsis does not come from the atmosphere. Barring the question of control, there is little difference, so far as results are concerned, where we operate.

Dr. J. Price: Dr. Allis has given an interesting point in reference to the selection of cases and the importance of promptitude. The whole experience of abdominal surgeons is in favor of promptitude in pelvic abscess and in small tumors of all kinds. I may say in regard to mortality that if my mortality equalled the number of cases that I find dead when I arrive at the house, I should cease to operate. A man to do abdominal surgery should serve an apprenticeship, not only that he may know what to recognize, but that he may, with specimens in hand, compare them with the histories. With a pair of pus tubes or a pelvic abscess, you can almost demonstrate the number of attacks of pelvic peritonitis that the woman has suffered.

It is very nice to talk about the sequelæ of abdominal sections, but the sequelæ antedate the operation in many cases. I saw today, a large cystoma, probably complicated with fibroid. The patient had been counselled by many not to have the tumor removed. I sometimes wish that the general practitioner and general surgeon were like the eye and ear men—they attend to their business and say nothing about anything else.

Dr. J. M. Baldy: Unquestionably many of the so-called sequelæ occur before the section has been performed. Many, also, are due to incomplete operations. I do not think that any one cause is a fault. I have not found that fistulæ and herniæ are more apt to occur in fat women, nor have I found that suturing of the fascia will prevent it.

In regard to hospitals, I believe in railroading patients into hospitals, if you have well-appointed ones. You have there a better chance to do good work and to watch the patient. Some of my best work, however, has been "alley work," but it has been most anxious work. In these cases I have been forced to permit them to get up in two weeks. In hospitals you can keep the patient in bed. I think that four weeks is not too long.

As to the cause of death, I have seen one death from shock in the hands of another gentleman. I have seen one or two deaths from hæmorrhage, but the one great cause of death is septic peritonitis. In some of these cases I have thought that the tube was at fault, but in others there was no drainage. In regard to early operation, if it is an operative case, the operation cannot be done too soon.

Dr. Charles P. Noble: In regard to the cause of death after abdominal section, I may say that in my own experience the deaths, with two exceptions, were due to the fact that the patient was operated on when she was almost dead from disease. I have had three deaths from kidney trouble. In two the condition was not discovered prior to operation. Serious kidney disease is a positive contra-indication to abdominal section involving any considerable manipulation.

I think that our facilities for managing patients are much better in hospitals than at home, and I think that there is every inducement, both on account of the patient and ourselves, to urge her to go to a hospital.

In reference to cellulitis. Most men who do abdominal surgery say that they never see cellulitis. I have seen it but do not

think that it is a common condition. I do not believe that we meet with it as a non-puerperal condition. Cellulitis in the pelvis occurs as does cellulitis in other parts of the body—from infection. I have knowledge of four abdominal operations in which the tubes were examined and found free from pus accumulations. Of course it was not possible to say that catarrhal salpingitis was not present. Large quantities of pus, however, were evacuated through an incision over the ramus of the pubes. They were undoubted cases of pelvic abscess. I believe that this accounts for the fact that certain women recover and bear children after they have had pelvic inflammation complicating labor.

In regard to drainage, it has become my practice to drain in almost every case, and I have seen no reason to regret it. Unless there is a special reason to the contrary, I drain every case. It is often said that unless the tube is cleaned every half hour to two hours the surgeon does not understand drainage. At the Kensington Hospital for Women there has been a series of as many as sixty cases, with one death, where this principal of drainage was not used. In the last thirty-three cases (without a death) the drainage-tube was not evacuated oftener than three times in twenty-four hours. My experience with the capillary drain, running over one hundred cases, enables me to say that it is a most efficient form of drainage, and that it is the exception, even in bad cases, to find more than a drachm of fluid in the pelvis when the tube is drained. By this measure the pelvis is continually drained.

Dr. Hoffman: While a capillary drain will remove the liquid, it will not remove clots. The syringe will. All that my point stated was that cleaning the drainage-tube once in twelve hours is not cleaning it.

In regard to hospitals, I can control my patients better in their homes. The hospital is not a *sine qua non*, and it is not free from danger.

In speaking of advice in surgery, I did not object to real advice. We, however, compromise ourselves by seeking operations, although those things are done. If an operation is necessary we should say so, and tell why it is. If the patient does not accept it, the result does not lie at our door.

The Bacteriological World is the title of a monthly illustrated magazine for the study of microbes and diseases of bacterial and parasitic origin, edited by Dr. Paul Paquin, of Columbia, Mo.

Dr. W. W. Keen then read a paper entitled:

A FURTHER COMMUNICATION ON A NEW METHOD OF COMPRESSING THE SUBCLAVIAN ARTERY: WITH THE REPORT OF TWO CASES.

He said, I desire to call the attention of the Society to the method which I proposed some time since for controlling the circulation in the upper extremity by elastic compression of the subclavian artery. (*Transactions Philadelphia County Medical Society*, February, 1890.) This, it will be remembered, was effected by a pad over the subclavian, held in place by the ordinary rubber bandage of the Esmarch apparatus; the elastic bandage being carried from the chest over the back, and then alternately between the thighs and in the opposite armpit.

Not long after I made the suggestion I made a trial of it for my friend Dr. Hearn, in the clinic at the Jefferson Medical College Hospital. In this case the application was a failure. The failure, I think, arose from two reasons. First, the man had a very prominent clavicle and a deeply-seated first rib; and, secondly and chiefly, the pad used was the ordinary roller bandage. The conical graduated pad, as suggested by Dr. Parkes below, is far better.

I received a letter from the late Professor Charles T. Parkes, of Chicago, dated Oct. 24, 1890, recording his use of it in another case in which the absolute control of the subclavian was almost a *sine qua non* for the perfect operative procedure, and in which the method, submitted to such a crucial test, succeeded so well that I venture to quote from his letter. I need scarcely point out that all our former methods for controlling the artery would not have given such command of the circulation as to make the deliberate dissection and ligation practised by Dr. Parkes a possibility:

"Allow me to congratulate you on the perfect success of the plan recommended by you for the control of the circulation in the upper extremity. The adoption of it yesterday enabled me to carry to a successful issue an operation for the relief of an immense traumatic aneurism of the axillary space, following a laceration of the axillary artery by a bullet from a heavy 45-caliber revolver. After the application of the rubber band in the manner you recommend with a compress over the subclavian artery, I laid the aneurism wide open, cleaned out all the clots, and finally found a large tear in the artery, and applied a ligature above and

below it without the patient losing any blood. Twelve hours after the operation circulation was so far restored in the limb as to make a successful termination almost certain. I attribute the ease and readiness with which the difficult procedure was accomplished, to the perfect control of the circulation permitted by the adoption of your plan. It is certainly of great value. If an amputation at the shoulder-joint had been required it could have been without the loss of a drachm of blood.

"No more trying test could be given to the method than the case in which I used it. A traumatic aneurism in the axillary space from a large wound in the artery is certainly one of the most difficult things we have to deal with. The application of the bandage in this case enabled me to work deliberately and with perfect ease. No motion on the patient's part can displace it.

"I think the character of the pad used under the bandage and over the artery has much to do with the success of the method. This pad should be somewhat in the nature of a graduated compress, small enough at its apex into the interval between the clavicle and the first rib, and yet thick enough and firm enough to reach well above the clavicle and the side of the neck, so as to take all the pressure off the rubber."

To answer this purpose I have had made a wooden pad, the bevelling of the top is for the purpose of enabling the rubber bandage to hold it in place and prevent its slipping either inward or outward. There are two holes at the sides and end for a removable handle, resembling a two-pronged fork, with which to hold it while applying it.

I have tried a similar but larger pad for the iliac arteries, but so far its experimental use has not been satisfactory.

DISCUSSION.

Dr. Miller: We are certainly indebted to Dr. Keen for his valuable contribution to the technique of operations in which the subclavian artery is concerned. It often happens that while under ether the patient is difficult to manage or vomiting occurs, and then there is liability of displacement of the key if we rely upon that to control the hæmorrhage. Several years ago I amputated at the shoulder-joint in a very muscular man. The patient began to struggle, and there was considerable difficulty in controlling the artery. In that case I should have been much more comfortable had I had the apparatus described by Dr. Keen.

I noticed that the subject on whom Dr. Keen demonstrated the application of the apparatus expressed considerable pain. This is probably due to the length of the pad, which pressed upon some branches of the brachial plexus. If this pressure were continued for twenty minutes it might lead to considerable injury.

Dr. O. H. Allis: The one to whom the care of the artery is given in these operations about the shoulder-joint has no enviable position. I do not know when I have been more alarmed during a surgical operation than when I assisted a friend in amputating at the shoulder-joint. It was my duty to control the artery. I passed my thumbs underneath the flap, and as he cut the muscles they contracted so forcibly that it was with difficulty that I controlled the vessel. In compressing the artery to-night Professor Keen probably used more force than was necessary, and this will probably account for the pain.

Dr. A. Hewson: I should like to ask Dr. Keen, in reference to the effect of motion of the vertebral column on the apparatus. Would not this interfere? I have this evening seen a friend compress his own axillary artery so as to stop the radial pulse. The pressure seems to be made by the lower part of the trapezius muscle acting on the spines of the scapulæ, and the latissimus dorsi on humerii, the humerii being rotated inward and drawn downward and backward. The individual was a spare medical man, and locking his hands behind him and then straightening the whole upper extremities, he was able to prevent pulsation in the radial arteries.

Dr. Keen: This is the first time that I have seen pain caused by the application of this apparatus. I think that the pressure was too great. It is possible that India-rubber would be better than ebony.

I do not see how movements of the spinal column or of the clavicle would have anything to do with the position of the pad, which presses directly on the first rib.

I have never seen a case like the one detailed by Dr. Hewson, and should not have thought it possible that the artery could be controlled in this way if I had not his testimony to that effect.

Dr. John B. Roberts reported, a

CASE OF EXOSTOSIS OF HUMERUS SIMULATING AXILLARY DISLOCATION.

He said, there is nothing especially interesting about the patient, whose photograph he presented, except the situation of the bony growth.

The boy, who is about eight years old, fell from a pair of steps, and struck upon his shoulders. As he was supposed to be hurt, his clothing was removed, and the condition shown in the photograph observed. The physician who first saw him at once took it for granted that the deformity was due to the fall, and that an axillary dislocation existed. He made unsuccessful attempts to reduce the supposed luxation. Shortly afterward he examined the boy, and found that the prominence, mistaken for a displaced head of the humerus, was an exostis situated at about the epiphyseal line, between the shaft and the head. This, curiously, had never been noticed before by the child or his parents.

Some weeks subsequently he removed the little tumor by means of chisels, and found it to be cancellated bone partly covered by cartilage. The wound healed promptly under the usual antiseptic treatment.

It is needless to say that the symptoms of dislocation were absent, except that there was a rounded mass of bone to be seen and felt in about the situation occupied by the humeral head in subcoracoid luxation.

Selected Formulæ.

NASAL DIPTHERIA.

Raulin recommends that the membrane be detached by antiseptic irrigation and the raw surfaces covered with the following:

℞

Lactic acid	gr. xxx.
Carbolic acid	gr. xlv.
Pure glycerine	ʒ i

—*Revue Gén de Clin. et de Thérap.*

OINTMENT FOR INTERTRIGO.

℞

Boric acid	7 grains.
Lanolin	12 drachms.
Vaseline	3 "

This ointment is to be applied to the diseased area, which is first cleaned by the use of a mild soap.

CROUP.

J. B. Johnson uses the following:

℞

Aquæ destillat	f ʒ i.
Potass chlorat	
Potass iodid	aa ʒ i.
Emuls. arabicæ	ʒ ij.
Mucilag. acaciæ	
Ext. ipecac., fl	
Olei capaibæ	aa ʒ i. M.

S. Shake well. Dose, a teaspoonful every ten minutes, to an infant of 8 months, till free vomiting ensues; and then continue the same dose every half hour or hour until the disease is cured. The dose must be given according to the age of the child.

—*New England Med. Monthly*, 1891.

WHOOPING COUGH.

℞

Terpin	gr. xv.
Antipyrine	gr. xv.
Syrup aurant. cort	ʒj ʒvj.
Mucil. acac	ʒij.

M. Sig. ʒj to ʒij several times a day for a child under four.

—*Talaman, Times and Register.*

MIXTURE FOR DISSOLVING DIPTHERITIC MEMBRANES.

Caldwell is stated by the *Medical News* to recommend the following solution for this purpose:

℞

Papain	ʒijss.
Hydronaphthol	grs. ij.
Acid muriatic	gtt. xv.
Aq. destillat	ʒiij.
Glycerini	ʒij.

M. Sig. Apply to the affected parts every half hour by means of an atomizer.

DIARRHŒA.

℞

Tr. opii camph	ʒ j.
Mistura cretæ	ʒiij.
Ol. menthæ pip	*Mx.*

A teaspoonful for an adult every three hours until diarrhœa is checked. For infants the following prescription will be more appropriate and more easily retained on the stomach:

℞

Vin. Pepsini	ʒ ij.
Bismuth subnitratis	ʒiij.
Glycerini	ʒj.
Aquæ	ʒiv.

Give one drachm at a dose every two or three hours.

LARYNGITIS.

Moure recommends the following to be used in the treatment of laryngitis:

℞

Crystallized carb. acid	gr. vij—xv.
Hydrochlorate of cocaine	gr. vij.
Opium	ʒ jss.
Distilled water	ʒx

This may be applied by means of a brush three times a day, or

℞

Boric acid	ʒj.
Crystallized resorcin	ʒss.
Cherry-laurel water	ʒjss.
Distilled water	ʒx.

This mixture may be used in an atomizer for from three to five minutes morning and night, or three or four times a day, if the condition of the throat is subacutely affected.
—*La Tribune Médicale.*

BED SORES.

Prof. Rosenbach recommends that lanoline be rubbed into the red spots indicating an impending bed sore. He has had unvarying success with it.—*Pacific Medical Journal.*

CREOLIN IN ACUTE GASTRO-ENTERITIS.

Schwinz has employed this drug with success in the following formula:

℞ Creolin..... ....*M* iij.
Syrup althæa.....f 3 v.
Aq. cinnamonii, q. s., ad..... .....f 3iij. M.

S. To a very young child a small teaspoonful hourly. To older children the drug may be given in a powder.

℞ Creolin..... .....*M*xv.
Sacchari alb.....gr. lxxv. M.
Divide in Chart No. X.
S. One or two powders daily.

—*Wiener Medizinische Wochenschrift*, No. 3, 1891.

DYSENTERY.

Rossbach employs naphthalin in the following manner in this condition:

℞ Naphthalin..... .....grs. x.
Boiling water..... 3 iv.
Decoction of marshmallow..... Oj.

This is to be used as an injection at the temperature of 100°. In children who suffer from diarrhœa dependent upon the presence of parasites in the lower bowel, the quantity of naphthalin which is employed should not be more that 15 grains in 4 ounces of oil.

COCAINE FOR PAINFUL TEETHING.

℞ Cocaine hydrochlorate..... ..... .1½ grs.
Syrup.....2 fl. 3.
Tinctute of conium.....20 gtts.
M. Sig. To be rubbed on the gums several times a day.

—*Merck's Bulletin.*

BETOL AS AN INTESTINAL ANTISEPTIC.

M. Yvon states that betol or naphtalol or salinaphtol is valuable in children's diseases where an intestinal antiseptic is indicated. As is well-known betol is a salicylate of naphtol. The following is a good formula in cases of the character mentioned above:

℞ Betol.....gr. xv.
Syr aurant flor.....3j.
Aquæ acaciæ.....5 v.
M. Sig. In dessertspoonful doses.

The total amount above given may be taken in twenty-four hours. The betol may also be given alone in milk in the doses indicated above. As the taste is very slight it is not difficult to administer.

TREATMENT OF ECZEMA.

I should like to call the attention of the profession to the value of a method of treating certain cases of eczema. It has been highly lauded by Prof. Unna, and my attention was called to it by a friend, Dr. D. W. Montgomery, whom I called in consultation for a case of eczema equamosa of both lower legs, attended with terrible and uncontrollable itching. The pruritus was of such a character as to resist all the ordinary treatment, and it was rapidly breaking down the patient's strength. In a very short time after using the formula given below, a most marked change took place in the troublesome symptom, and in fact the disease is being conquered:

℞ Gelatine.....5 iv.
Zinc. oxide.....5 ijss.
Glycerine.....5 ss.
Aquæ.....5 vj.

Heat the water, and dissolve in it the gelatine, then add the glycerine and zinc, stirring until cold.

This makes a stiff jelly. When used it is to be heated sufficiently so that it may be painted with a small varnish brush all over the affected parts, and a thin layer of cotton placed over it at once. This acts like a protecting scab which the patient is unable to tear off with the finger-nails; in fact it has such a soothing effect that the desire to scratch is of little moment.

It is quite unnecessary to say that the general health received due attention. The purpose of this correspondence is to call attention to the treatment.—*Dr. C. C. Vanderbeck, in Pac. Med. Jour.*

WARTS.

℞ Hydrarg. chlor. corros..... 1 part.
Collodion..... .....30 parts. M.

S. Apply once daily about the base of the wart.

—*Cincinnati Lancet-Clinic*, February 21, 1891.

AN EXCELLENT HAIR TONIC.

℞ Acid carbolic.....5 ss.
Tinct. nucis vom.....5 ij.
Tinct. cinchonæ rubræ..... .....5 j.
Tinct. cantharidis.....5 ss.
Aq. coloniensis / Ol cocao } .....q. s., ad. 5 iv.

M. Sig. Apply once or twice a day to the scalp by means of a soft sponge. This will prevent the hair from falling out if it does not produce a luxuriant crop.

HANSON'S MAGIC CORN CURE.

A good corn cure that is similar in every respect to Hanson's Magic Corn Cure is made by taking of—

℞ Simple cerate.....1 oz.
Salicylic acid.....1 dr.

Mix intimately.

—*Indiana Pharmacist.*

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The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

IN THE PREPARATION OF SPONGES FOR SURGICAL USES, WHICH IS THE SAFEST STERILIZING FLUID: A SOLUTION OF CARBOLIC ACID OR ONE OF CORROSIVE SUBLIMATE?

The surgery of to-day demands the most rigid antiseptic precautions to be taken, even in matters of minor moments; consequently the subject under discussion is well worthy of consideration.

Few of the ordinary needs of a surgical operation are in more general and frequent requisition than sponges. No other substance possesses in itself all the physical qualities of a sponge; and, therefore, there is no known article that, from a surgical standpoint, can take its place. Such being the case, it is essential that the utmost care and attention be given by the operator to their preparation and purification.

The meshes of a sponge can readily become a lodging place for septic germs, and it behooves the surgeon to be on the alert less he infects his patient by one which is poorly disinfected.

In the present article we shall have nothing to say about the routine preparation of sponges for the market; nor of their purification for surgical use—up to the point when they are ready for immersion and preservation in the solutions of carbolic acid or of bichloride of mercury. We will take it for granted, for the purposes of discussion, that they have been carefully prepared thus far, and will now occupy ourselves with the consideration of the subject of this article, viz.: the relative value of the sterilizing qualities of the two antiseptics upon sponges.

In a recent article "On Sponges and their use in Surgery," (*Annals of Surgery,*) A. Ernest Waylard, M. B., of Glasgow, details some interesting experiments which he made upon this subject. We will record the gist of these experimental tests, with their results:

Experiment One:—Two new sponges—a Cuban wool, (which is an open textured sponge) and a Cuban fine, (which is a close

or dense textured sponge) were thoroughly rinsed in hot water and then placed in a solution of carbolic acid (1 to 40) and kept there over night. The following morning the fluid was changed. Each of the sponges was now squeezed by the hand as free as possible of the carbolic solution, and then divided by a sterilized pair of scissors. From the center of the sponges so divided, small pieces were removed by another pair of sterilized scissors, and separately inserted into tubes of Koch's beef-peptone jelly, previously liquified. The tubes—two of each specimen— were placed in the incubator and left at a temperature of 37° C. for forty-eight hours. Examination of the contents of the tubes at the expiration of this time showed a muddy appearance of the two, containing the dense or close textured sponge, while those containing pieces from the open textured one, were quite clear. A microscopical examination of the muddy jellies showed them to be loaded with microbes.

Thus experimentally, the author shows that 12 to 18 hours immersion in a 1 to 40 solution of carbolic acid had not asepticised the close textured sponges, but apparently had done so in the case of the open textured ones—although in each instance the sponges had been prepared with considerable care and with every intention that the should be clean, and after sterilization, fit for surgical use.

Experiment Two :—The above experiment was repeated, except that the preparation of the sponges was attended to by Mr. Wayland. After this had been done, the two sponges were placed in 1 to 40 carbolic solution, where they were allowed to remain twenty-four hours. Each sponge was then divided and pieces removed from the centers and placed in jelly tubes, in the same manner as in the first experiment. The tubes were now placed in the incubator, where they were left for forty-eight hours. Development of microbes took place in the tubes containing the pieces from the dense textured sponge, but none appeared in those containing pieces from the open textured one.

Experiment Three :—The above experiment was repeated, only this time with pieces of the dense textured sponge above, and with the same result—an extensive development of microbes: rapidly in those placed in the incubator and more slowly in those left in the room at the ordinary temperature.

The author states that these experiments seem to prove, with little room for doubt, the inefficiency of solutions of carbolic acid of a strength of 1 to 40, to sterilize the central part of close textured sponges.

This failure on the part of carbolic acid led me to try the sterilizing power of solutions of bichloride of mercury. The principal reasons for not testing stronger solutions of the acid was that sponges used direct from such solutions would be inconvenient, if not sometimes harmful; and at all times an expensive procedure from the quantity of solutions required.

Since the experimentor's object, therefore, was a practical one, he made use of solutions that could be used in large quantities, and for this purpose choose a 1 to 2,000 solution of bichloride of mercury such as is in common and constant use in surgical practice.

Experiment Four :—The Cuban fine or dense textured sponges were alone used. The sponges were prepared as in former instances. They were then placed for twenty-four hours in the solution of mercury, at the end of which time pieces were removed from their centers and inserted in jelly-tubes as before. Two tubes were placed in the incubator and two in the room. No development of microbes occurred at any time in either set of tubes. Thus it appeared that the mercury solutions had succeeded, where the carbolic acid had failed.

For the purposes of testing more surely the relative sterilizing power of the two solutions—bichloride of mercury and carbolic acid—and to eliminate a possible objection against the last experiment, that no control had been made and that therefore the sponges may have been aseptic from the first, the following experiment was performed:

Experiment Five :—A Cuban fine sponge was placed immediately over the orifice of a

discharging sinus, situated in the thigh of a patient suffering from necrosis of the femur. When removed from the wound on the following day, it contained a quantity of excessively fœted pus. The sponge was placed in a glass receptacle and kept until the following day, and when then exposed its odor was about as bad as it well could be. The sponge was now taken from the jar, rinsed and squeezed several times in hot water. After this washing it still maintained an offensive smell, which was especially marked in the center of the sponge, after it had been divided.

Each half was now placed into a separate jar, the one containing a solution of carbolic acid of a strength of 1 to 40, the other in a solution of bichloride of mercury of a strength 1 in 2,000. They were left in these solutions for eighteen hours, at the expiration of which time tube cultivations were made in the manner already described in former experiments. Two tubes of each were placed in the incubator. On the following day the two tubes containing the carbolized fragments had each a dense opaque scum upon their surfaces, while the two tubes containing the mecurialized fragments were perfectly clear.

The practical deductions to be drawn from these experiments are:

1. That a solution of the bichloride of mercury is the safer, and, therefore, the better sterilizing medicine for sponges. It is, also, the cheaper drug.

2. That sponges with open, somewhat coarse nestwork, are least likely to be septic from causes connected with their preparation.

3. That large sponges and thick, dense ones, should be prepared with special care, especially after contact with fœted pus or other infected substances.

CORRESPONDENCE.

To the Editor.

Dear Sir:—Your editorial on Curetting the Uterus in Puerperal Fever, draws attention to an ever interesting subject. While all will agree in the main with the authorities referred to in your article, it seems to me that in some respects the teachings inculcated can be modified or added to with advantage. I wish to speak of several practical aspects of the subject.

Some years ago, in the capacity of Assistant at the Philadelphia Lying-in Charity, I had the opportunity of studying a series of cases of puerperal septicæmia. My observation would lead me to believe that the proportion of cases dying within twenty-four hours of the onset of the disease is small. I have seen but one such case—a woman having a contracted pelvis who was delivered by the high forceps operation. In this case there is reason to believe that infection was introduced within the cavity of the uterus. In all other cases coming under my notice I have been impressed with the fact that the observant physician will find symptoms to warn him of the impending danger, and enable him to institute treatment before the life of the woman is endangered by the progress of the local inflammation, or the system is poisoned by the absorption of septic material. This point cannot be insisted upon too strongly; and broadly speaking, the obstetrician who recognizes septicæmia in his patient only after it has progressed to its full development must be considered culpable, not only for the existence of the malady, but for negligence or incompetence in failing to recognize its early manifestations. The physician who daily palpates the hypogastrium and notes the progressive involution of the uterus, who watches the functions of the bladder, who notes the state of the lochia, and who carefully observes the state of the pulse and temperature will almost never be confronted without warning with a full blown puerperal septicæmia.

With reference to the thoroughness with which the curette will remove septic material from the uterus, I am disposed to differ with Braun. Cases are on record in which careful men have curetted the uterus to remove the supposed remnants of a miscarriage, in which, after this supposed emptying of the uterus an abortion, fœtus and all, has occurred. So experienced a man as Goodell absolutely rejects the curette for the removal of particles of placenta, and holds that it is impossible to determine the absence of foreign bodies in the uterus by the use of the curette. Were it necessary it would be easy to collect positive proof that the curette cannot be depended upon to do what is claimed by Braun and Fritsch. The only way to determine whether the puerperal uterus is

empty is to introduce the index finger to the fundus, under anæsthesia. If no small fragments of placenta are present, the use of the curette will remove the infected, softened decidua.

Anæsthesia, necessary for the proper examination of the puerperal uterus, will greatly facilitate the subsequent curetting. My own experience warrants me in doubting whether American women will consider the procedure comparatively painless, as claimed by Braun.

Again, in ordinary cases of labor the cavity of the uterus is not invaded by the fingers or instruments of the attendant. Hence, when septicæmia results, the processes usually have their origin in the vagina, and when treatment is instituted promptly, the uterus may escape infection.

It seems to me that if the principles of asepsis and antisepsis were fully appreciated by the practitioner that puerperal sepsis would be encountered but seldom in private practice. It is now well ascertained that puerperal septicæmia is caused by the introduction by the physician or by the nurse of septic germs within the genitals of the puerpera, at the time of or shortly after labor, or it is caused by the activity of germs already present within the vagina at the time of labor.

It has been positively proved that the vagina swarms with germs. Inasmuch as they do no harm as a rule, it may be assumed, until our information is more definite, that under ordinary conditions the germs present are non-pathogenetic. But when vaginitis, with an imitating leucorrhœa is present, we may well question the innocence of the germs. It has been a rule in my practice for a long time to question women in the latter months of pregnancy, as to the existence of vaginitis, and when there has been the least reason to suspect it, an examination has been insisted upon and the vaginitis vigorously treated with suppositories of alum and irrigations with alum, and with sublimate solutions. No one who is at all familiar with modern bacteriology will expect to disinfect such a vagina by giving a sublimate douche at the beginning of labor. Hospital experience apparently has shown that the routine use of vaginal antiseptic douches at the beginning of labor is to be avoided. It will be interesting to watch this point in practice in the future, influenced as it will be by more definite knowledge concerning the efficient use of germicide. Undoubtedly, in the past, asepsis of the vagina has not been obtained.

Practically, the most important point—although every step is important—in obstetrical antisepsis is to secure asepsis of the hand of the physician. My views upon that point can be found in The Reporter for February 28, 1891. The reason why many men do not employ rigid methods for cleaning the hands is that certain practitioners of large experience have not done so, and yet have not had sepsis in their practice. Doubtless these men have been cleanly in their person, and their work has not brought their fingers in contact with septic matter. But let such men dress erisipelatous wounds, or wounds discharging pus!

Lard, as commonly used, has kept many a woman from puerperal sepsis, by covering over the germs on her physician's fingers; but after all it is a frail banner of defence. Should it be depended upon by the conscientious physician, when five minutes use of the nail brush, with soap and water, especial attention being given to the examining finger, followed by a sublimate, both for three minutes, will go so far to ensure his patient against the dreaded "child-bed fever?" Very Respectfully Yours,

Charles P. Noble,
Philadelphia.

Book Reviews.

STUDIES OF OLD CASE-BOOKS. By Sir James Paget, Bart. London: Longmans, Green & Co., 1891. Philada.: Blakiston & Co.

If we could imagine a physician ignorant enough not to be acquainted with the writings of the eminent surgeon and teacher—Sir James Paget, F. R. C. S., and surgeon to St. Bartholomew's Hospital—we might suppose that the title, "*Studies of old case-books,*" would give to such an one the impression that the present volume was a mere recital of dry cases used as a basis for a book and of no practical interest to the general practitioner.

To one, however, at all familiar with this writer's versatility, sound judgment, quick perception, and, above all, his power of imparting to others the knowledge he has gained by years of observation and study, the book is picked up and perused with evident pleasure, with an assurance to the average reader, that as each page is scanned information has been gained.

The volume is replete with so much knowledge and so many practical suggestions that to do justice to a review we would be obliged to extend our remarks beyond the

limit of the space at our command. We, therefore, content ourselves with saying that we have read through the seventeen chapters comprising the book without losing, for a single instant, the interest awakened at the beginning.

In conclusion, we would add that the busy physician will find in "Studies of old case-books," several hours of pleasant and profitable reading.

SAUNDERS'S QUESTION COMPENDS. ESSENTIALS OF PHARMACY. By Lucius E. Sayre, Ph. G., Professor of Pharmacy, and Materia Medica, of the School of Pharmacy of the University of Kansas. Phila.: W. B. Saunders, 1890.

The writer of this epitome of chemistry, pharmaceutical and practical, deserves credit for having embraced in one small volume so much which is necessarily frequently referred to by physicians in general practice. Of course the book is specially intended to aid the students in craming for examination, but as the majority of medical institutions are not at present insisting upon such a preparation in pharmacy, as a careful study of this compend would impart, it is probable that a large portion of its usefulness will consist in its being a handy-book for the general practitioner, who can readily find any ordinary question clearly answered. The work is arranged in the form of questions and answers. The questions are printed with bold-faced type, and the book is finished in the neat manner which characterizes this series of quiz-books. Besides definitions of the terms in pharmacy, and a thorough "quiz" upon the mode of preparation of all the various officinal mixtures, the book also contains a complete review of all the substances ordinarily used in medicine, as well as much pure chemical knowledge.

TREATMENT OF AMENORRHŒA.

℞

Bichloride of mercury	3 grains.
Arsenite of sodium	3 "
Sulphate of strychnine	1½ "
Carbonate of potassium, Sulphate of iron (of each)	45 "

Make into sixty pills and give one pill after each meal.

—*Revue Méd.-chir. des Mal. des Femmes.*

INFANTILE CONSTIPATION.

Bouchut employs the following syrup:

℞

Podophyllin	gr. i.
Alcohol	f 3 iss.
Syrup althæa	f 3 iv. M.

S. Dessertspoonful daily.

—*Union Médicale*, 1890.

PERISCOPE.

THERAPEUTICS.

TREATMENT OF PNEUMONIA WITH LARGE DOSES OF DIGITALIS.

At the last International Medical Congress Professor Petresco of Bucharest read a paper on this subject. He makes an infusion of sixty grains of powdered digitalis leaves to six ounces of water, a little syrup of orange being added to sweeten it. A tablespoonful of this mixture is given every half hour. In spite of the largeness of the dose, he says that he has never met with a case of poisoning, and maintains that these doses are therapeutic, and not toxic. The best results are obtained in fibrinous or croupous pneumonia. The author states that if used in the way he describes digitalis will frequently cut short an attack of true croupous pneumonia. In from twenty-four to forty-eight hours after taking the drug a certain fall of temperature occurred, from 104°F. to 98°F.; this being accompanied by a decrease in the frequency of the pulse and respiration. The digestive tract was little affected. The most marked changes were noticed in the pulse, which became slow, full, and of high tension. The conclusions to which Professor Petresco has come are published in the *Therapeutische Monatshefte*, Feb. 1891. They are as follows: 1. When given in therapeutic doses digitalis has a direct antiphlogistic action. 2. The dose may be raised as high as from 60 to 120 grains of the leaves given as an infusion within twenty-four hours. 3. This treatment may be continued for from two to four days if the severity of the case requires it. 4. When improvement takes place in the circulation and respiration, this is speedily followed by a disappearance of all local signs and symptoms. 5. The success of this treatment is confirmed by the statistics. In an elaborate table of statistics Professor Petresco shows the superiority of digitalis over the other methods. Thus the highest mortality in pneumonia (34·5 per cent.) occurred when bleeding was practised, and the lowest (3 per cent.) when tonics, alcohol, &c., were employed. When digitalis, however, was administered the mortality sank as low as 2·06 per cent. 6. From an experience of a very great number of cases, both of his own and of other medical men, he maintains that the doses, as given above, are perfectly harmless. 7. After a comparison of the various methods of treating pneumonia, Professor

Petresco affirms that the expectant plan is not only without reasonable foundation, but even dangerous; and his experience has demonstrated that an attack of pneumonia may be aborted if the treatment is commenced at the very earliest stages of the disease.—*Lancet.*

THE ACTION OF COCAINE ON THE CIRCULATION.

Dr. Edward T. Reichert, in the *American Lancet*, from a careful study of the actions of cocaine on the circulation in animals, deduced the following conclusions:

1. The discrepancies in the testimony offered by different experimenters, in their investigations of the action of cocaine on the circulation, are almost wholly due to variations in the absolute doses employed, and to the individual susceptibility of the animals.

2. The minimal fatal dose, when injected intravenously in divided doses in the form of a one per cent. solution, varies from 0.004 to 0.03 gramme to the kilo of the body weight. Owing to the great differences in the sensitiveness of different dogs to the poison, a moderate dose in one animal might prove a small or a large one in another of similar weight.

3. When the full train of effects on the heart-beat is slowly developed by the repeated injection of very small doses (0.001 gramme to the kilo of body weight) the pulse-rate is at first decreased, then increased, and finally decreaseed. A single very small dose causes a decrease, a small to a moderate dose an increase; large doses a transient decrease followed by an increase; very large doses a more or less permanent decrease. The primary decrease which only can be developed by very small doses, is due to a stimulation of the cardio-inhibitory centres; the secondary increase to a depression of the same centres, and which may be assisted by a similar action on the cardio-inhibitory peripheries; and the final decrease to a depression either of the accelerator or automatic motor-ganglion in the heart. The height of the pulse-curves during these changes is always in inverse relation to the frequency of the beat.

4. The cardio-inhibitory centres are invariably affected, being primarily stimulated, and secondarily depressed; but the action on the peripheries is of a very inconstant character, although a primary stimulant action is never manifest, the depressant action is sometimes present to a profound degree very early in the poisoning, and, at others, absolutely absent up to the time of death.

5. The arterial pressure is always increased, unless it be after large doses, when it may temporarily be diminished, followed by a rise above the normal; or after very large doses, be permanently lowered. The increase may be decided long after the development of the third stage of the actions on the heart, and, therefore, may outlast the period of the acceleration of the heart's beat. The increase is chiefly due to a stimulation of the vaso-motor centres in the medulla oblongata; to a slight stimulation direct of the vessel-walls; and to the acceleration of the pulse. The final fall of pressure is chiefly dependent upon a depression of the heart, and partly to vaso-motor depression.

6. The effects of cocaine in normal and curarized animals are identical, unless, in the latter, the curare has been used to excess.

7. Cocaine is a decided circulatory stimulant.

TREATMENT OF THE NIGHT SWEATS OF PHTHISIS.

Huchard reports in the *Rev. Gén. de Clin. et de Thérap.*, February 4th, the results with many medicaments tried for the relief of the sweating of phthisical patients. Among these may be mentioned lead acetate, tannin, phosphate of lime, ergot, atropine, and muscarine. Of these the two first are unreliable, and are seldom used, and probably atropine sulphate is the most valuable (one-half to one milligramme at night). Phosphate of lime should be given in large doses (one to two drachms daily) to produce anhidrotic effects, and even in these doses it has several times failed. Ergot (fifteen to twenty-two grains of the powder at night) is much more reliable. When the sweats co-exist with more or less marked fever, the author recommends the use of quinine combined with ergot.

℞ Quinæ sulph.....gr. xvi.
Pulv. ergotæ..... ..... ʒ ss.
Divide into four cachets—two or three to be taken daily.

This formula is specially valuable in phthsis with hæmoptysis. Lastly, powdered agaric is an excellent remedy, not equal to atropine, but parfectly harmless, and never causing derangement of digestion. It may well be combined with tannin or belladonna, given in doses of three or four grains.

The same writer speaks very highly of antipyrin in the initial fever of tuberculous patients. The older drugs, quinine, tartar emetic, salicylic acid, all fail, or have but

slight effect. It is specially in this *initial* fever that antipyrin is of great service. One must, however, distinguish between an *analgesic* and an *antipyretic* dose of the drug. To obtain the former effect, one would give a large dose (say fifteen to thirty grains) in a short time, but this must not be done if its best action as an antipyretic is desired. It is well for this purpose to use constantly decreasing doses (say sixteen grains, twelve grains, eight grains), taken care to divide them so that at no time during the twenty-four hours is the patient not under the influence of the drug. Used in this way, Huchard declares that antipyrin seems to have a *special* action on the tuberculous lesion, and to greatly retard or to arrest its progress.

Professor Combemale has used tellurate of sodium, in phthisical and other sweating. It was first recommended by Neusser who gave one-third or two-thirds of a grain in pill once daily. Combemale gave it up to nearly one grain per dose, and tried its effects in eleven cases. His conclusions are: It is a powerful anti-sudorific; a dose of nearly one grain gives rise to digestive troubles, and especially to a strong garlic odor in the breath. All the compounds of tellurium cause a very disagreeable odor in the breath, and this must always be a bar to their employment, as it is very persistent and disagreeable.

In addition to the list sulphonal has been used with success by a few reporters.—*Bost. Med. and Surg. Jour.*

VARIATIONS IN THE CAUSTIC ACTION OF CARBOLIC ACID.

It is claimed on the authority of Dr. Charles that carbolic acid, if dissolved in glycerine or alcohol is not caustic, whatever be the degree of concentration. An aqueous solution or even a small per cent. of water added to the alcohol or glycerine solution will act as a caustic to the skin and mucous membrane.—*Le Bul. Med.; Weekly Med. Review.*

PIPERAZIDINE AS A SOLVENT FOR URIC ACID.

It is stated in a German pharmaceutical journal that piperazidine dissolves urid acid more readily than any other substance of a basic nature. Urate of lithia requires 368 times its own weight of water to dissolve it, but urate of piperazidine dissolves in fifty times its weight of water. It may therefore be expected that this drug will become a fashionable, let us hope too an efficient, remedy in gout and allied diseases.—*Lancet.*

TREATMENT OF HYPERPHORIA.

Dr. H. F. Hansell (*American Journal of the Medical Sciences*) says:

That hyperphoria is a real affection, and that, while it may exist without causing symptoms, it is in some cases of the highest importance:

That it may produce reflex disturbances in an oversensitive or exhausted system:

That reflex functional disorders are found in patients with hyperphoria, which are not caused by hyperphoria:

That it is not dependent upon errors of refraction:

That it should be sought for in every case of asthenopia:

That the degree can be determined only after repeated examinations:

That tenotomy, and not prisms, is the treatment for hyperphoria:

That in most cases the tendons should be completely divided.

Of the six cases reported above, two presented symptoms of hyperphoria when no want of equilibrium of the verticle muscles could be detected; one had hyperphoria with asthenopia, which was entirely relieved by the correction of the refractive error. Three had local and reflex symptoms due to hyperphoria, and were cured by tenotomies.

It may be objected that the cases are too few to enable one te deduce therefrom laws for general acceptance. No such deductions are made. Nothing more has been attempted than a truthful recital of the histories and a careful observation of the points presented to my own mind. They furnish so much data from which the reader may form his own opinion and draw his own deductions. The subject is new, attractive and important, and deserves more partial investigation and study than it has hitherto received.

THE ACTION OF SACCHARINE ON THE HEART.

Loutzensko has studied the action of saccharine upon the heart of the frog, and finds that when 1½ grains of a two-per-cent. solution of saccharine with bicarbonate of sodium is injected into a frog the animal in one hour appears to be better. It is insensible to the touch, but pinchings provoke feeble reflexes. The heart is finally arrested in diastole, but if pinched will once more begin to contract. Electrical stimulation also produces these contractions of the heart. In doses twice or thrice as large as that named, Loutzensko found that saccharine causes irregular cardiac movements.

The effect of the drug upon the vagus nerve after such doses is very feeble.—*Revue Général de Clinique et de Thérapeutique.*

THALLIN.

Thallin is an oily liquid, perchloride of iron imparts to it an emerald green color. The following salts are known: Sulphate of thallin, tartrate of thallin, and hydrochlorate of thallin. Concentrated solutions have a bitter, salty, and piquant taste. The weaker solutions have an aromatic and agreeable taste. The sulphate is soluble in five times its weight of water, and the tartrate in ten times its weight of water. The salts have marked antiseptic properties, since they retard the fermentative processes of ammonia and alcohol, and also of milk.

Therapeutic properties:—The sulphate is the most active. It may be employed with advantage in solution as an injection in cystitis. It is also given internally as an antipyretic. By its use, in nearly 100 cases of various fevers, including intermittant fever, rheumatic fever, measles, erysipelas, fever during the puerperim, pneumonia, and tuberculosis. Dr. Jacksch, reports (in the *Journal de Méd. de Paris*, May 3, 1891) to have been able to reduce the temperature to normal, without the occurrence of any untoward symptoms.

In intermittant fevers the drug seems of especial value. If the drug is given two or three hours before the regular time of the rise of temperature, the febrile attacks will be lessened both in intensity and duration. Yet, when a curative action is desired we must return to sulphate of quinine. The remedy, therefore, while being a powerful antithermic, is not an antiperiodic. In typhoid fever, and espedially in rheumatic fever, the drug is prompt in acting; yet it neither lessens the course of the disease, nor relieves the pain. When the thallin salts are used the fall of temperature is always accompanied with abundant perspiration. The secondary rise of temperature following the exhibition of the drug, occurs within four or five hours, and is frequently preceded by a chill. No digestive disturbances, cyanosis or any unpleasant symptoms seem to be caused by the drug.

MEDICINE.

ON THE ETIOLOGY OF TINNITUS AURIUM.

Dr. H. MacNaughton Jones read a paper on the subject named above in the Section of Otology, British Medical Assocsation, 1890. (Reported in *Medical Press and Circular.*)

The paper is based upon two hundred and sixty cases of tinnitus aurium, taken from the author's private note-book. Of these, 127 were males, and 133 females. The ages varied from under ten years (3) to eighty years. The youngest patient was three years old. The right ear was the seat of tinnitus 36 times, the left ear 53 times, and both ears 171 times. The ascribed causes were cerumen, 30; naso-pharyngeal catarrh, 28; nasal turbinate congestion and obstruction, 19; mental worry and over-strain, 14; sea-bathing, 12; scarlatina, 9; heredity, 8; effects of tropical climate, 8; the menopause, 8; injuries, 7; hypertrophied tonsils and tonsillitis, 7; abscess or inflammation of meatus, 7; cardiac disease, 7; gout, 5; uterine disorders, 5; measles, 4; syphilis, 4; alcohol, 4; rheumatic fever and rheumatism, 3; pregnancy, 2; Bright's disease, 2; ozœna, 2; decayed teeth, 2; facial paralysis, 1; puerperal septicæmia, 1; quinine, 1; adenoid growths, 1; from gun-concussion, 1; pneumonia, 1; parotitis, 1. In the remaining cases no cause was assigned.

The clinical conditions of the ear found in these cases were chiefly: catarrhal changes in the tympanum, 102; the same with closed Eustachian tube, 38; making really 140 cases of associated tympanic disease.

The hearing distance was normal in both ears in 18 cases. In 185 cases tinnitus and deafness alone were complained of; in 22 cases aural vertigo was also present. In 7 cases only were there any accompanying ocular symptoms. Attention is called to Ferrier's statement, that "the sense of hearing is in greater part situated in the temporal lobe, and more especially in the superior temporal gyrus of this lobe." Dr. Ferrier also is quoted as saying that "tinnitus may occur in both ears as the result of unilateral irritation, the effect of the intimate connection of the auditory nerves and centres."

Very slight causes may underlie tinnitus aurium, as for example: A fine membranous husk of a hay-seed resting on the membrana tympani.

The following is a basis for a classification of the different causes and varieties of tinnitus aurium, condensed from the original:

1. Impulses originating in the temporal lobe or superior temporal gyrus, the cerebellum, or the auditory nuclei (in the medulla or pons), and referred as impressions to various situations—as the labyrinth or cer-

tain parts of the head. Such acoustic impressions may or may not be attended by deafness.

2. Impulses due to irritation, direct or reflected, in any portion of the auditory nerve.

3. Impulses originating in the peripheral ends of the auditory nerve (perhaps the most numerous class.)

4. Irritation arising from interference with the intra-tympanic muscles.

5. Irritations transmitted by altered conditions of equilibrium of the air in the tympanic cavity.

6. Irritations due to disease in the middle ear and labyrinth.

7. Irritations arising in the external ear.

8. Some aural hallucinations, subjective impressions arising in the psycho-sensorial brain-centres, and having no objective cerebral or aural source of origin. Such hallucinations may become insane hallucinations. The latter may be divided into two distinct forms: (*a*) Hallucinations which arise subjectively in the brain when the auditory apparatus and nerves are healthy. (*b*) Hallucinations which are secondary to objective changes in the aural apparatus, and in which a tinnitus is developed that leads up gradually to a fixed illusion.

9. Therapeutical causes of tinnitus aurium.—*Amr. Jour. Med. Sci.*

CIRRHOSIS OF THE LIVER AND NERVOUS SYMPTOMS.

In the St. Bartholomew's Hospital Reports, vol. xxvi., Dr. Ormerod directs attention to a curious and important class of cases in which extreme cirrhosis of the liver is present, and in which the symptoms are mainly nervous. He relates the particulars of one which was under the care of Dr. Gee. The patient was a boy of ten, who had three or four months before admission developed weakness with cramped position of right hand and arm, and difficulty in speaking. This condition became more pronounced, and was accompanied by gradual mental impairment, difficulty in swallowing, and finally some affection of the left arm and hand. During the time he was in hospital, his condition was characterized by severe attacks of pain, extreme noisiness, and idiotic appearance. The electrical condition of the muscles remained unchanged in spite of the contractures and weakness. During the last three months of life he had occasional attacks of pyrexia, sometimes with profuse sweating, he developed bedsores; the urine became alkaline and phosphatic, and mental hebetude became extreme. The optic discs and fundi underwent no change. At the necropsy the liver was found to be in a state of extreme cirrhosis, and the only lesions found in the nervous system were two small, almost symmetrical patches of softening in each lenticular nucleus, and two minute points apparently also of softening in the pons. Dr. Ormerod in his comments on this case, mentions one or two similar cases, of which, however, he is unable to give full notes; but reference is particularly made to set of cases recently published by Professor Homen in the *Neurologisches Centralblatt.* These cases were three in number, and the patients were all members of the same family. Their symptoms were giddiness, headache, mental failure, unsteady gait, and difficulty of speech, together with contractures of the limbs, and in two of them there were found, in addition to slight changes in the cortex cerebi, softening in both lenticular nuclei and well-marked cirrhosis of the liver. These cases offer a new problem in symptomatology, for, whatever may be the relation of the slight changes found in the nervous system to the symptoms produced during life, there seems to be little room for doubt that the fundamental morbid condition is the cirrhosis of the liver.—*Lancet,* Mar. 7, 1891.

THE INFLUENCE OF TOBACCO ON GASTRIC DIGESTION AND ACIDITY OF THE URINE.

Dr. J. Ydan-Pouchkine reports a number of experiments which he has made in this connection on seven healthy individuals who were not habituated to tobacco-smoking, and his results are reported in the *Bulletin Général de Thérapeutique* for February 15, 1891.

He first examined the effects of tobacco on the gastric juice and the motility of the stomach and on degree of absorption and on the acidity of the urine. For three days the author examined the gastric juice and motility of the stomach, noting the degree of motion of the stomach by salol, according to the process of Ewald and the rapidity of absorption with the iodide of potassium, according to the method of Zweifel, during a second period of three days each, in which the individual smoked, respectively, twenty-five cigarettes daily. For three days after this period the author continued the examination of their gastric juice in order to determine the after-effects of the tobacco. His conclusions are embraced in the following statements:

1. Tobacco increases the quantity of gastric juice, but diminishes its acidity.

2. The quantity of free hydrochloric acid of the gastric juice is diminished under the influence of tobacco.

3. Proportionately to the decrease of the amount of hydrochloric acid there is an equal diminution of the digestive power of the gastric juice.

4. Tobacco likewise slows the action of the gastric ferments.

5. These modifications in the gastric juice produced by tobacco last for a period of several days.

6. As regards the motility of the stomach and its power of absorption, tobacco is stated to produce an increase of these functions.

7. Tobacco has no influence on the acidity of the urine.—*Therap. Gaz.*

SURGERY.

REMARKS ON FIVE HUNDRED CASES OF STRICTURE OF THE URETHRA

Desnos (*Annales des Maladies des Organes Génito-Urinaires*, Jan. 1891) records his observations upon the etiology and treatment of stricture of the urethra, derived from 500 cases.

In the immense majority of the cases the strictures were of gonorrhœal origin; in two instances they were caused by the cicatrization of urethral chancres; and four cases resulted from traumatism, such as falls and kicks. He draws attention to what he calls "slight traumatism of the canal," which sometimes takes place during coitus, and sometimes follows a prolonged erection during the course of an attack of gonorrhœa. He believes that these little ruptures of the mucous membrane are more frequent than one would suppose, and that they play a considerable part in the genesis of stricture.

His experience goes to show that gonorrhœal strictures are of slow development, having never seen one in which a year and a half, at least, had not elapsed since the beginning of the urethritis. A traumatism, on the contrary, whether slight or extensive, leads to the rapid formation of a contraction.

He points out as a remarkable fact the degree to which a stricture may attain before the patient experiences functional troubles. Many patients do not seek relief for difficulties of micturition, but for such complications as cystitis, fever, digestive disturbances, etc.

As to the locality of the stricture, an analysis of the cases showed that almost all the constriction was in the bulbous portion of the urethra. In nearly one-half of the cases the strictures were multiple, the tightest ones being in the bulbous region. He never met with an instance in which the stricture was impassable, but always, even in the most difficult cases, after patient and repeated efforts, has succeeded in passing a bent filiform bougie.

The methods of treatment employed by him, and the number of cases treated by each, were:

	Cases.	Deaths.
Gradual dilatation	387	1
Internal urethrotomy	78	0
External urethrotomy	3	1
Electrolysis	32	0
	500	2

With regard to gradual dilitation, he insists upon the necessity of proceeding with extreme slowness and patience, avoiding all violence, rapidity of movement, and pressure, however slight. Of the employment of cocaine in the urethra, he says that he rarely uses it. Outside of the dangers inherent to the drug, he has found a disadvantage in the fact that the cocainized urethra offers a certain degree of resistance to the passage of sounds. He insists in a most positive manner upon the association of antiseptic and aseptic measures with the instrumental treatment of the urethra, cleansing the external parts with a boric acid solution, and irrigating the urethra with it as well. The instruments to be employed should be sterilized. To the patient he administers salol or biborate of sodium. His experience goes to prove the value of these precautions, since he met with urethra fever in but two per cent. of his dilatations.

As to the question whether dilatation really leads to the cure of stricture, the writer is unable to adduce a sufficient number of facts, less than one-half of his patients having remained long enough under observation.

Passing on to the operation of internal urethrotomy, Desnos expresses his preference for the Maissoneuve urethrotome, having employed it in all but two of his seventy-eight cases. He uses a small blade, and thinks that a division of the stricture to a calibre of twenty-one or twenty-three is quite sufficient. He thinks that when it can be easily introduced, a catheter should be left in the bladder after the operation, for the purpose of preventing contact of the urine with the wound; but when difficulty is met

with, he believes that the attempts to pass the catheter will be of more serious import than the omission of its use.

External urethrotomy he regards as an operation required only in exceptional cases. Of the three patients upon whom he performed it one had multiple perineal fistulæ, another had a calculus impacted behind a tight stricture, and the third suffered from stricture resulting from rupture of the urethra.

Desnos's conclusions as to the several methods of treatment show that he strongly favors gradual dilatation as being applicable to the greatest number of strictures. He calls attention to the advantage which it possesses of not confining the patient to bed, and its freedom from serious risks, and believes that it should undoubtedly be employed if the dilatation progresses regularly, and no complication arises. If, during the course of treatment, cystitis, prostatitis, fever, or hemorrhage, should be met with; or if, after dilatation, the contraction speedily returns, the operation of internal urethrotomy is indicated. He is of the opinion that the final results of the operation will advantageously bear comparison with any other mode of treatment.—*Univ. Med. Mag.*

A METHOD FOR REMOVING TATTOO MARKS.

Variot (*Jour. de Med. et de Chirurg. Prat.*, January 10, 1891) details the procedure which he adopts for the removal of these disfigurements. The skin to be decolorized is first washed with a concentrated solution of tannic acid, and is then closely punctured with a set of needles, such as tattooers use. A crayon of nitrate of silver is next thoroughly rubbed over the area, and after a moment the skin is dried off, when it will be found that the punctures are deeply blackened by the formation of the tannate of silver in the superficial layers of the skin. The cauterization is said to result in an inflammatory reaction for a couple of days, and subsequently in the formation of a crust or thin eschar, which separates spontaneously in from fourteen to eighteen days, leaving beneath it a superficial red cicatrix, which gradually loses its color, and at the end of a few months, M. Variot states, is scarcely perceptible. He does not consider it expedient to attack at one sitting an area larger than a dollar, lest the inflammation provoked should be too severe, and interfere with the pursuance of the daily duties of the individual. The only dressings which he employs after the little operation consists in keeping the part powdered with tannin.

NERVE-GRAFTING.

Atkinson has recently reported a number of successful cases of nerve-grafting to the British Medical Association. It is important to bear in mind that the substitution of a new piece of nerve for a piece that has been lost (nerve-grafting) is a totally different thing from the uniting of a nerve (nerve-suturing). In one case the median nerve had been divided in an operation. Two and one-half inches of the tibial nerve from an arm that happened to be amputated at the same time, was transplanted to the forearm of his patient. Healing occurred by first intention, and sensation began to return in thirty-six hours, and in five weeks was complete. The muscles partly recovered their power. A number of other cases were reported with similar results. Strict asepis is important, though union may occur following suppuration. Return of sensation occurs before motion. Better results are obtained when the grafting is performed *immediately after the injury.*

GYNÆCOLOGY.

EFFECT OF LEECHES IN THE UTERINE CAVITY.

Dr. Montane (*Nouvelles Archiv. d'Obst. et de Gynéc.*, March, 1891) states that he is not accustomed to plug the os with wool when applying leeches to the cervix, but simply catches each leech with forceps with large teeth, places it against the cervix, and lets go of it when it has taken a firm hold of the tissues. He has never seen a leech shift its position. Once, when he was applying leeches, the patient sneezed violently, so that the Ferguson speculum was shot out of the vulva. When reintroduced three leeches were found still adherent to the cervix, and a fourth rapidly escaped up the cervix, and ensconced itself in the uterine cavity before it could be seized with a forceps. A red rubber sound was passed up the cervix, and a small amount of warm carbolised water thrown into the uterus. The water came back in intermittent jets, and at length a black body appeared, which was seized with forceps; it was the cephalic end of the leech, which was easily extracted. The patient knew nothing of the misadventure. Dr. Montane's colleague, Dr. Arrango, describes another case where a leech could not

be displaced so speedily from the uterine cavity. It set up intense pain, which, it is remarkable to note, was referred to the region of the right ovary. Violent convulsions followed, and lasted for nearly half an hour, leaving the patient in a most distressing state of excitement, the pain being unabated. The fits returned. Three hours after the beginning of the pain the patient was seized with violent uterine contractions, compared by her to the sensations experienced during an abortion, the leech, perfectly gorged with blood, escaped from the vulva, the pains and convulsions thenceforth ceasing entirely.—*Brit. Med. Jour.*

THE TOTAL EXTIRPATION OF THE UTERUS.

Fifty-seven cases are reported in which the author has removed the entire uterus; for carcinoma, 53; sarcoma, 2, and prolapse, 2. In favorable cases of carcinoma one should hope for complete cure. Partial extirpation is rarely indicated. In one case a partial operation was performed upon a woman who was seven months pregnant, a wedge-shaped excision of the cervix being performed without interruption of the pregnancy. In only two of the above series did death result from the operation, the cause in one being uræmia after ligation of the left ureter and wounding of the bladder. In two cases it was subsequently necessary to perform kolpo-kleisis on account of vesico-vaginal fistula. In three cases the patients were more than 60 years of age. The suturing of the peritonæum and disinfection salicylic and boric acid are deemed very important. In twenty-five of the carcinoma cases a year passed without recurrence of the disease. Recovery from the operation was usually rapid. In cases in which there was recurrence the thermo-cautery and chloride of zinc were used. In none of the operations was there severe hæmorrhage, and in one case a vesico-vaginal fistula was cured by the operation upon the uterus.—*Jour. de Méd.*

DEFECTIVE DEVELOPMENT OF GENITALS.

Dr. von Swiecicki (*Der Frauenarzt*, April 1, 1891) was consulted recently by a robust woman, aged 30. She had always been healthy as a child. After the age of 20 the menstrual molimen was noticed every four weeks, and the hands and feet then became swollen to a marked degree. A little blood passed from the anus; at the same time there was nausea and headache. All these symptoms lasted for about four days. Early in January a severe attack of hæmatemesis set in during the presence of the menstrual molimen, and the vomiting of blood recurred four times within a week. Nearly a pint of blood was lost during each attack. On this occasion it was remarkable that the breasts became swollen, which was unusual, though the ordinary œdema of the hands and feet did not occur. The patient was perfectly feminine in mind and in general confirmation. The hymen, like the vulva, was normal, but there was an impassable septum above it. After very careful recto-abdominal and recto-vesical exploration it was concluded that the vagina, uterus, and left ovary were entirely absent. A small right ovary could be distinctly defined. Dr. von Swiecicki quotes Kline's case, where the uterus and vagina did not exist, but both ovaries were present. Molimen with epistaxis for two days occurred every three weeks. Œdema of the extremities has been observed in other cases, and may accompany menstruation otherwise normal. Börner refers it to vasomotor disturbances.—*Brit. Med. Jour.*

OBSTETRICS.

ON THE TREATMENT OF BREECH PRESENTATION.

Winter (*Deutsche Medicinische Wochenschrift*, February, 1891) contrasts the different line of treatment to be adopted in breech and foot presentations, and the more favorable prognosis offered by the former variety. Expectancy is the attitude to be adopted in footing cases, but interference is necessary if in breech presentations delay becomes dangerous to mother or child. The indications for bringing down a foot in breech cases and completing delivery are complications endangering the life of mother or child, such as slowing of pulsation in the cord, impending asphyxia, hæmorrhage, septicæmia, &c. In prolapse of the cord, eclampsia and contracted pelvis, this method of procedure may also have to be adopted. The writer quotes the opinions of various authors as to the particular form of contracted pelvis in which the operation can be performed with beneficial results. He considers that in normal conditions it is wrong, because it is unnecessary, and while not entirely harmless for the mother may be very detrimental to the child. In eighteen cases where delivery speedily followed drawing down of the foot,

seventeen of the children survived, while in nine cases, where delivery was more tediously accomplished, four of the children were lost.

The writer advocates bringing down a foot in preference to traction with the fingers, loop or blunt hook, all of which are either tedious or dangerous. If these were so safe an instrument for the breech as forceps for the head, there would be no necessity for bringing down the feet. All the breech forceps invented have been failures.

If the foot cannot be brought down, the author recommends traction with the finger, inserted between the thigh and abdomen of the child, and if this be unsuccessful, a skein of worsted or silk may be employed; but this is often difficult or impossible of application. Poppel advocates introducing it by means of a Bellocq's sound. Winter strongly recommends an instrument invented by Bunge, and called a "loop carrier." It consists of a curved metal staff, grooved on its concave surface, and containing a thick hempen cord covered with gutta-percha, and about eighteen inches long. The latter is passed by means of the staff between the thighs and abdomen of the child, the staff is withdrawn, and the loop can then be used as a tractor.

His conclusions are:—(1.)Normal cases to be treated by the expectant method. (2.) Bring down a foot in cases of prolapse of the cord, eclampsia and contracted pelvis, but not, as a rule, before the os is well dilated. (3.) Complete the labor in breech cases where desirable by bringing down a foot, and proceed at once to extraction of the child. If the breech is too low in the pelvis for this operation, use the finger as a tractor, and should this prove unsuccessful, employ Bange's instrument or a skein of wool.—*Dublin Jour. Med. Sci.*

ANATOMY OF TUBAL PREGNANCY.

Two cases are recorded occurring in the practise of Dr. Landau. In the first case the patient died in a few minutes after the arrival of the physician. In the second the patient's condition was so poor that no operation could be attempted. But in spite of rupture the patient rallied and made an excellent recovery. In Case I. the autopsy revealed a rupture of the right tube. The decidua was removed from the uterus. In Case II. pieces of decidua came away. Careful microscopic examinations were made of these specimens, and from these the following are formulated:

In tubal pregnancies occurring in the fourth and fifth week we find:

1. That the endometrium is about to become changed into a decidua. The compact layer, the so-called layer of Friedländer, is not fully formed.

2. The superficial epithelium of the decidua uterina is intact as late as the middle of the second month, although its form is materially changed.

3. The vessels which are found in the superficial layers of the decidua uterina are in all probability arteries and veins.

4. The ovary and tube on the unimpregnated side remain unchanged. The ovary containing the gravid corpus luteum is enlarged.

5. The cause of tubal pregnancy may be assumed to be due to a diverticulum in the walls of the tube or a marked tortuosity of the same.

6. That portion of the tube not included in the impregnated sac usually remains unaltered.

7. A decidua tubaria vera is formed upon the mucous membrane of the tube, having its greatest amount of development at the poles of the ovum. The superficial epithelium of the decidua serotina disappears, and is replaced by the endothelium of the freely communicating capillary vessels.

8. In the majority of the cases no decidua tubaria reflexa is formed. If one is formed it differs entirely from the uterine reflexa, owing to its small number of vessels.

9. The attachment of the chorionic villi to the decidua tubaria is extremely loose in the beginning of the pregnancy, but in some situations a complete union between the two is found.

10. The epithelium of the chorionic villi is of the three varieties. The maternal capillary endothelium lies external to a double layer of fetal epithelium.

11. The intervillous spaces are composed of dilated maternal capillaries, whose walls are not penetrated by the chorionic villi.—*Archiv. fur Gynäkologie.*

TOXIC SPASM OF PARTURIENT UTERUS OVERCOME BY ANTIPYRIN.

Dr. Wright, of Toronto (*Archives of Gynæcol.*, New York, April, 1891) reports the case of a primipara, aged 22, of sedentary habits. The pelvic outlet was slightly narrow; pregnancy was normal. The os was rigid, and the membranes ruptured prematurely, so that the first stage of labour lasted over twenty-four hours, although

three 15-grain doses of hydrate of chloral were given to relax the os. The head then descended rapidly half down the vaginal canal, but then the progress of labour became slow. At the end of forty hours the head was well down in the perineum, but the rigidity of external parts rendered the pains ineffectual. Symptoms of exhaustion then began to appear. The pains became shorter and more frequent, the pulse increased to over 100, and the patient complained of nausea and thirst. It soon became impossible to make out distinct intervals between the pains, and, on examination, the uterus was found retracted, and in a state of tonic contraction. Three 15-grain doses of antipyrin, to be taken at intervals of one quarter of an hour, were prescribed. Before the second dose had been given the patient felt easier; after the third the pains were about three minutes apart, and the tetanic contractions had disappeared. The head, being very large in proportion to the outlet, was delivered with forceps under chloroform. The uterus took three-quarters of an hour to contract properly after the administration of ergot in drachm doses. Dr. Wright considers that this case shows the value of antipyrin in uterine tetanus. It might more beneficially be used before the muscular fibres and nerve centres are exhausted by prolonged tonic contractions.—*Brit. Med. Jour.*

PÆDIATRICS.

INFANTILE CEREBRAL PALSIES.

Professor Sachs, in a paper read before the New York Neurological Society (*New York Med. Journ.*, May 2nd, 1891), discusses the pathology of the cerebral paralyses of infancy. He divides them into the congenital cases, that is, those occurring before birth and due to gross cerebral defects; birth palsies, the result of protracted labour, where meningeal, or more rarely intracerebral, hæmorrhage has taken place; and those acquired after birth, in which in agreement with the majority of recent writers on this subject, he considers vascular lesions as by far the most common cause; next to these he places chronic meningitis and hydrocephalus; and lastly, Strümpell's primary encephalitis. This last condition he believes to be excessively rare, and he holds that the theory should be accepted with some reserve. The diagnosis of the different kinds of vascular lesion, that is, embolism, thrombosis, and hæmorrhage, he admits to be sometimes very difficult, but when hæmorrhage can be diagnosed, he thinks that surgical interference is imperatively called for. If the symptoms point to the formation of a large clot over the motor area of a child otherwise healthy and strong enough to endure the operation, he recommends that an attempt should be made to remove the clot in order at once to relieve pressure upon the given area, and to prevent secondary degeneration. This latter point would be certainly well worth attaining, but the diagnosis of intracranial hæmorrhage in the young is by no means so easy. Still, where it can be made, there is no objection to the use of the trephine.—*Brit. Med. Jour.*

SPINAL PARALYSIS IN CHILDREN.

Several cases of this disease are reported by Professor Charcot in a recent number of the *Journal de médecine et de chirurgie.* In examining into the antecedents of these cases a family history of nervous disease is frequently found. Hysteria, epilepsy, insanity, and various other nervous affections are not uncommon. This is, however, in contradiction of Cordier and others, who have seen the disease occur epidemically. In one case reported by the author fatigue seemed to play an important ætiological role. On the third day after excessive fatigue the child became delirious and one of the legs was found to be paralyzed. The case was peculiar from the fact that but one limb was attacked at the outset. The paralysis did not change from place to place and finally locate itself in one member, as is frequently the case. It was confined to the sciatic region and was very severe. Complete loss of all electrical reaction indicated that all hope of cure was gone. A second patient was attacked without apparent cause. Chilliness was the only symptom at the onset, and was followed in the evening by paralysis of the left leg. On the following day the left hand also was involved. The bladder was soon affected, which resulted in retention of urine for several days. This is a symptom of frequent occurrence in children.

NOTES OF AN EPIDEMIC OF MEASLES.

Dr. Frederick Stanbro says: I write these notes, not because Rubeola is such a rare disease, but in order to put on record certain irregularities observed during this epidemic, which I trust, will be of interest, and may be of service to the general practitioner.

Beginning in the last week of January, 1891, and continuing seven weeks, there has

been a severe epidemic of measles in this region. No such epidemic has been observed here in fifteen years, both as regards severity, numbers attacked, and small mortality.

All unprotected persons have been attacked, and six authentic cases I have observed which have suffered a second attack. These six persons had measles before, under the observation and care of physicians in this vicinity, and there can be no mistake. Three had mild attacks from three to ten years ago, and three had severe attacks seven years ago. Each of these six cases had measles under my observation this season, and all had it in the severest form, the prodromes, rash, catarrhal symptoms, all being typical. I lay special stress on these cases, as there seems to be some doubt on this subject among medical minds, as well as among the laity.

Of the 110 cases observed and treated, I find sixty males, and fifty females; of these, twenty-four were adults and six were infants under the age of nine months.

The period of incubation was about nine days, but the eruptive stage was wonderfully delayed, the rash not appearing until a week had passed, in the majority of cases, and in two cases of young ladies, aged respectively sixteen and eighteen years, the rash did not appear until nine and fourteen days had passed, during which time they were confined to the bed with the usual symptoms of the prodromal stage—viz., malaise, headache, bone-ache, slight fever, etc.

During this period of "invasion" the patients were all ill and suffered from aching bones and muscles, constipation, nausea, headache, and other symptoms similar to those of "la grippe" of last year. A slight rise of temperature would be observed, and for about three days before the appearance of the rash the coryzal symptoms and the peculiar hacking cough would appear.

The temperature was extremely high as a rule, being 103° F. in most of the cases, 104° F. in twenty cases, 105° F. in ten cases, and 105.5° F. in three cases.

The pulse was correspondingly high, running from 120 to 160 in the severest cases. Slight congestion of kidneys occurred in most of the days before the appearance of the rash, and delirium was a common symptom.

In a few cases, earache was so severe as to call for local treatment.

Sequelæ.—Catarrhal pneumonia attacked one patient weakened by the measles, and whooping cough occurred in nine cases. The severe coughing caused a direct inguinal hernia in a young man about sixteen years of age. Otherwise all the cases recovered, not one of the 110 dying, and only one is now under my observation.

Treatment.—The simpler cases demanded no treatment, except light diet and some calming expectorant.

The more severe cases were kept in warm, darkened rooms on strictly milk diet. High fever was relieved or controlled by tr. aconite, quinine and tepid baths. Constipation relieved only by warm enemata. Dysuria, or suppression of urine, by spirits of nitre and other simple diuretics.

The conjunctivitis required nothing but warm lotions, and the general pruritus was relieved by inunctions of vaseline or lard.

Only a few required any tonic treatment during convalescence.—*Exchange.*

BROMOFORM IN WHOOPING COUGH.

Recently THE REPORTER has several times found occasion to speak of the efficacy of bromoform in whooping cough. Perhaps the most recent experiences with the drug are those of Dr. Naurœkers, of Brussels, which are referred to in the *Wiener. Med. Wochenschrift*, May 10, 1891. The author gives the drug in the following formula:

℞

Bromoform	xx gtt.
Alcohol	10 0 grammes.
Sol. gum. trag	
Syr. tolu, aa	60 0 grammes

M. One coffeespoonful every hour.

The mixture should be well shaken before administration, and should be kept in a well corked bottle. The solution of gum facilitates an equal distribution of the remedy in the mixture and the large quantity of syrup marks its unpleasant taste, so that children take the dose without murmuring.

In adults, Nauwelœrs gives the drug in capsules, each containing gramme 0.50 of bromoform. He gives the patient 14 capsules during two or three days. In children the dose should vary with the intensity of the attack and the strength of the child. At first 8–10 drops daily is usually a sufficient dose but in a few days this may be increased to 20 drops, if found necessary.

Bromoform has one drawback; it is apt to cause diarrhœa. In order to hinder such an action, the drug may be combined with opium or astringents. If, however, the diarrhœa still persists, the drug must be discontinued for a few days. In 74 cases in which the drug was tried, it only failed once. Three greatly weakened children died of broncho-pneumonia, but all the rest recovered rapidly,

the direct action of the drug being admirable. In many cases a cure was accomplished within 5–6 days. No other remedy has, as yet, shown such abortive properties in this disease.

HYGIENE.

INFLUENZA BACTERIA.

A recent number of the *Progrès médical* contains an abstract of an article by Professor Babes, which appeared in the *Centralblatt für Bakteriologie und Parasitenkunde*, on the subject of bacteria in influenza. The author has succeeded in isolating two varieties of micro-organisms to which he thinks that in all probability the pathological element in the causation of influenza may be attributed. Those of the first variety form short chains, are immobile, and are not stained by Gram's method. Their colonies are small in dimensions, transparent, and developed through the entire culture media. They have been proved capable of producing active pulmonary inflammations. The bacteria of the second class produce on agar-agar colonies that present a dark centre and a whitish periphery. They are also immobile, but, unlike the first variety, are colored by Gram's method. In mice, the inoculation of this culture produced fatal pneumonia, the bacilli being found in the blood-vessels; and in rabbits a local inflammation resulted.—*N. Y. Med. Jour.*

COMPULSORY NOTIFICATION OF INFECTIOUS DISEASE.

In criticising the notification bill of last year, one of the reasons which we urged against its enactment, was that it must always be impossible to enforce such law, or to impose the penalties provided for omission to notify. You may bribe an unscrupulous practitioner by half-a-crown to report an infectious case, but you can never punish him for omitting to do so, because you can never prove that he knew the case to be infectious and yet concealed it. The most careful and conscientious practitioner may be in doubt as to the nature of the disease for a week or ten days after its onset, while an ignorant or stupid man may fail to recognize it even when the symptoms were tolerably clear. But he could never be punished for mere ignorance, nor could a prosecution be successfully maintained if he met the accusation by denying that the case was infectious, and by asserting that the Medical Officer of Health was all wrong in his diagnosis. Our anticipation of the working of the Act in this respect has been fully realized, for the only attempt at prosecution which, as far as we know, has been made since the Act became law has completely failed, and a judgment has been given by the Court which makes successful prosecutions almost impossible. The worst of this is, that the law offers every inducement for the trickery of unscrupulous practitioners, while it handicaps truthful and conscientious persons. The unscrupulous doctor certifies every case which is not worth half-a-crown to him in private fees, and he conceals every case which is worth more than that sum. If he meets with a pauper who has shivered and has a headache, he at once concludes that the patient is in for an infectious attack, and he reports him forthwith, at a profit of half-a-crown, whether the case is really infectious or not, and the patient goes to swell the half-yearly earnings of the notifier and the total of infectious notifications, to the great satisfaction of the Medical Officer of Health. But if the patient happens to be worth more than half a crown, the practitioner is slow to diagnose infective disease, pronounces that it is nothing but a bad cold, and keeps the case concealed to the end of the chapter. An Act of Parliament which imposes penalties which it is impossible to enforce, is ridiculous, and its apparent results totally unreliable, and, therefore, we shall attach no confidence to the supposed beneficial results from the compulsory notification system until we see whether a decreased death-rate from zymotics is the outcome of it.—*Med. Press.*

THE SUPPRESSION OF JUVENILE SMOKING.

It is doubtless desirable to place some check upon the use of tobacco by juveniles—a practice which is every day becoming more general, or at any rate, more flagrant, but we know by sad experience that inebriety, whether of alcoholic or other source, is not easy to control by legislative enactment. The experiment is being tried in certain cities in the United States, but we are not yet in possession of any reliable data as to the effect of the police regulations. The labors of the ubiquitous policeman will be materially added to, if, in addition to preventing juveniles playing tipcat in crowded thoroughfares he be expected to stop every offender against an anti-juvenile smoking law. It was suggested at a recent meeting on the subject at Manchester that lads take

up with the habit "ignorantly supposing they will be benefited thereby," but this we venture to doubt, as also the proposed educational remedy based on that assumption. It is the imitative faculty which is mainly responsible for the spread of the habit among young people, and parental example is a potent factor in its promotion. The best plan would be to authorize municipalities to make and enforce tentative regulations of this kind, for an inoperative general law would only prove a barrier to such modifications as experience might suggest. The first step would necessarily be to make it an offence to sell the weed to persons below a certain age, as has been done in regard to spirits.—*Med. Press.*

MEDICAL CHEMISTRY.

THE QUANTITATIVE ESTIMATION OF SUGAR WITH ROBERTS' FERMENTATION TEST.

Dr. Morris Manges, in the *Medical Record* refers to two inherent important advantages in this process, which deserve notice. The one is that fermentation is the only absolute test for determining the presence of glucose; it is the chemist's crucial test to absolutely distinguish it from allied substances, some of which may have a similar chemical composition, or may reduce Fehling's solution, or may have a right rotary action on polarized light.[1] The other is that none of the usual reducing substances (albumin, uric acid, etc.) can interfere with its action..

The principle upon which all the fermentation tests are based is the well-known splitting up of glucose by yeast into alcohol and carbon dioxide. $C_6H_{12}O_6=2C_2H_6O+2Co_2$. Another reaction occurs which is not expressed in the formula; that is, the specific gravity of the fermenting fluid is lessened in direct proportion to the amount of grape-sugar present. This loss of weight is due not alone to the disappearance of the sugar, but also to the presence of the generated alcohol; it is the presence of the latter which sometimes, though rarely, causes the specific gravity of the fermented liquid to sink below 1,000.

From the above we see that there are several factors which may be utilized in quantative estimations by this method. 1. The carbon dioxide, usually estimated by volume, as in Einhorn's method. 2. The alcohol; is too complicated and unreliable. 3. The difference in the specific gravity of the unfermented and fermented fluids; may may be estimated (*a*) by actual weighing with accurate balance, as is done by chemists; is not adapted for general use; (*b*) by taking specific gravity, as in Roberts' method.

For clinical purposes we are thus reduced to the methods of Einhorn and of Roberts. Einhorn's method being too well known to need description here we shall at once proceed to consider the test proposed by William Roberts of Manchester; and so well has its distinguished author done his work, that, although thirty years have almost elapsed, the method stands practically as originally proposed. The only requisites for the test are a sufficiently wide cylindrical urinometer-jar of about two to three ounces capacity, and two good urinometers, one reading from 1.000 to 1.025, the other, 1.025 to 1.050;[1] large subdivisions of the scale are essential. Urinometers with thermometers are desirable, but by no means absolutely necessary. The tests of a good instrument are that in distilled water at the temperature for which it is corrected, the instrument should stand at 1.000, and in a dilution of any salt solution with an equal volume of distilled water the reading should be one-half of the gravity of the original salt solution.

The procedure is carried out as follows: Having accurately taken the specific gravity of the specimen of urine, and noted the temperature, about four ounces (if quantity is small, one-half this amount will suffice) are poured into a twelve ounce bottle, "a lump of compressed yeast about the size of a walnut" (half a cake will be found sufficient) is added and thoroughly stirred up; the bottle is then closed with a nicked cork, to prevent the escape of the CO gas generated. A standard is then prepared by filling a two or four ounce bottle with some of the same urine, and is securely corked without having added anything. The two bottles are now put aside in a warm room for eighteen to thirty-six hours, when the fermentation will have been completed, as is shown by the cessation of the formation of bubbles in the fluid, and also by the clearing off or subsidence of the scum. The bottles are removed to a cool place so that they may acquire the same temperature as at the beginning of the test; a portion of the fermented fluid is decanted and the specific

[1] Leo has isolated such a substance, which has the same chemical formula, reduces Fehling's solution, and rotates polarized light to the right, yet differs from glucose in not fermenting.

[1] Should the specific gravity be above 1 050, the specimen should be diluted. This is uncommon, however.

gravity and temperature are again noted. It is also well to note the gravity of the "standard," to see if it is identical with the original reading. The difference in the two readings of the specimen, before and after fermentation, multiplied by 0.23 will give the percentage of sugar in the specimen. Or we may express it thus: each degree of specific gravity lost in fermentation represents one grain of sugar to the ounce of urine. The total amount for twenty-four hours being known, the total amount of sugar can be calculated.

Roberts gives two examples. A specimen showed 11.36 per cent. sugar by titration with Fehling's solution, (= 49.64 grains to the ounce). The specific gravity was 1.0535; after fermentation it fell to 1.0045; it lost 49°, *i. e.*, 49 grains to the ounce; or, x 0.23 = 11.27 per cent.

A second specimen had 5.68 per cent. sugar (=24.82 grains to the ounce) as shown by titrating with Fehling's solution. The original specific gravity was 1.03032; after fermenting it fell to 1.01356; the difference was 24.76°, *i. e.*, 24.76 grains to the ounce; or, x 0.23 = 5.69 per cent.

Jaksch says, after trying the method on eight cases of diabetes, that "it gives thoroughly reliable results for clinical purposes, and is one which is to be commended, especially to busy physicians, on account of the simplicity and ease of its application." He quotes four cases which were examined with a special apparatus designed to prevent evaporation (which, however, is superfluous), the control-examinations having been made by polarization.

Guttman highly commends the method after having used it in over one hundred cases. He has simplified the method as follows: In a three to four ounce cylindrical glass vessel the specific gravity is taken; a quarter of a cake of compressed yeast is added and thoroughly stirred up; the vessel is covered with a piece of paper and set aside at 15° C. (59° F.) for twenty-four hours. Then the yeast has settled, and the specific gravity is taken in the same vessel at about the same temperature as the original observation. He has ascertained that the temperature changes exert slight differences in the result if the percentage of sugar is over one per cent.; and if over two per cent. it is reduced to $\frac{1}{2}$ per cent. to $\frac{1}{5}$ per cent. The exact difference is 3° C. (5.4° F.) = 1°; thus a reading of 1.022 at 12° C. would be 1.021 at 15° C., and 1.020 at 18° C.

Dr. Manges has tried Roberts's method in a fair number of specimens and the results, from a clinical point of view, have been very satisfactory. Comparisons were made with Einhorn's method, and the specimens were also titrated with Fehling's solution as modified by Munk.

Dr. Manges's observations agree with those of the other observers in proving that there is no constant source of error, but that the result may be more or less than the actual amount. What the cause of this error is he has been unable to ascertain. That it is not due to the urinometer is shown by Worm-Müller's figures, who also obtained higher and lower results although the pyknometer was employed to determine the difference in the specific gravity. Possibly we may find the cause in subtle changes of temperature, or in the secondary fermentation which occurs in the yeast itself. Whatever these influences may be, they are surely not of very great importance, nor do they detract from the claims of this procedure of being called the "Clinical Method," as proposed by Roberts.

The advantages of the method may be summed up thus: It is simple; it requires no special apparatus nor special experience; dilutions are unnecessary, and hence the multiplication of an error is avoided; impurities in the yeast have very little effect on the result. The disadvantages, besides that inherent in all the fermentation tests, that they are slow, are, that it does not show amounts of sugar below 0.4 per cent., and also that it requires a larger amount of urine. The latter, however, is more apparent than real, for in Einhorn's method we must also have enough urine to estimate the specific gravity.

There are also certain disadvantages present in Einhorn's method from which this method is free. In the first place, gases are much more affected by differences of temperature and atmospheric pressure than are liquids. Then the necessary dilution is a cause of inaccuracy; Einhorn gives definite rules as to the proportions, as if certain ranges of specific gravity must correspond with approximate amounts of sugar, for he directs that "diabetic urines of a straw color and a specific gravity of 1.018–1.022 may be diluted twice; of 1.022–1.028, five times; 1.028–1.038, ten times." There are other ingredients, however, in urine which may markedly affect the specific gravity, *i.e.*, urea, phosphates, chlorides, etc. The analyses already quoted show this very forcibly; thus, Nos. 8 and 9 of the last table both have specific gravity of 1.0315, yet the one has 4.37 per cent. sugar, and the other, 1.92 per

cent. Furthermore, a high specific gravity does not necessarily mean a large amount of sugar, nor a low specific gravity indicate a small percentage. Thus No. 3 of Guttman's cases has specific gravity of 1.011, yet has 1.495 per cent. sugar, and Nos. 11 and 12 of my own series, each with a specific gravity of 1.028, have only two per cent. and 1.38 per cent. sugar respectively. If we do not dilute enough, the gas will pass up into the bulb; if we dilute too much, the amount of gas will be so small that a large error is unavoidable, because of the subsequent multiplication.

Guttman has also shown that only a small part of the carbon dioxide remains in the long arm of the saccharometer, while the greater part escapes into the air through the bulb. Thus 10 c.c. of a one per cent. saccharine urine ought to give off 24 c.c. of CO at ordinary temperature and atmospheric pressure; of this only 5 c.c. are registered, while 19 c.c. are lost. (A small amount of the gas may also be absorbed by the fluid.) This objection, however, may be more theoretical than practical, for even Guttman comes to the conclusion that for saccharine urines under one per cent., Einhorn's method gives reliable results.

Dr. Mauges would go even further than this, and say that with most urines it gives results which are sufficiently accurate for clinical purposes; but, at the same time would assert that Roberts's method is in many respects superior to it. Neither method, however, gives absolutely accurate results. But this applies to every test which has yet been proposed for this purpose, even to the most delicate of them all, polarization and Fehling's test. For the right rotation of polarized light may be partially neutralized by the presence of oxybutyric acid, which rotates polarized light to the left. As for Fehling's test, we are all familiar with the difficulty of telling exactly when the blue color has disappeard, and we all know how its results may be affected by the reducing action of albumin, uric acid, kreatinin, etc.

News and Miscellany.

ITALIAN PHARMACOPŒA.

The first national Italian formulary is about to be published.

RESIGNATION OF DR. FRANCIS MINOT.

Dr. Francis Minot has resigned from the Chair of Practice in the Harvard Medical School.

DEATH OF DR. JOS. P. LOGAN.

Dr. Joseph P. Logan, editor of the *Atlanta Medical and Surgical Journal*, died at Atlanta, Ga., on June 2nd.

THE JOHNS HOPKINS HOSPITAL.

The Johns Hopkins Hospital accommodates one hundred and twenty patients and cost over two millions of dollars.

FOUR YEARS' COURSE AT HARVARD.

Beginning with September, 1892, the regular course in medicine at Harvard to obtain the degree of M. D., shall be four years.

DR. J. MADISON TAYLOR.

Bar Harbor, Maine, will be fortunate this summer in having at command the professional services of this distinguished physician.

A NEW JOURNAL OF GYNÆCOLOGY.

A monthly Journal of Gynæcology, Obstetrics and Abdominal Surgery has appeared, and is edited by Dr. Charles N. Smith, of Toledo, Ohio.

THE METRIC SYSTEM.

Russia is the latest to make the study of the metric system compulsory by all medical and pharmaceutical students, and has made it also compulsory in prescriptions and pharmacy.

TULANE UNIVERSITY.

The Medical Department of the Tulane University has been made the recipient of a donation from Mrs. T. G. Richardson of $100,000, which is intended to be used in erecting a new college. Mrs. Richardson is the wife of Dr. T. G. Richardson, an eminent physician and Dean of the College.

THE VIRCHOW TESTIMONIAL FUND.

October 13th will be the seventy-fifth birth-day of Professor Virchou, and on that occasion it is proposed that the profession pay a suitable tribute in appreciation of his invaluable labors for medical science. Five dollar subscriptions are being raised all over the world, and already a large amount has been subscribed in this country.

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GERSTS